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A STUDY OF THE REACTIONS OF PHYSICALLY NORMAL, BLIND, AND DEAF CHILDREN TO QUESTIONS IN A VERBAL INTELLIGENCE TEST

B. F. Holland, Ph. D.

Problem

The purpose of this paper is to report the results of a verbal intelligence test given to physically normal, blind, and deaf children in similar school grades. The object of giving the test to these different groups of subjects was to study the differences in their abilities, as shown in their gross scores, and to determine whether there are characteristic differences in their reactions to particular questions in the test.

Procedure

The Otis Classification Test, Part II, Form A, adapted for use with the blind by Ruth F. Sargent, was given to 229 children in grades three to six in an Austin elementary school, to 66 blind children in the same grades in the Texas School for the Blind, and to 68 deaf children in grades four to seven in the Texas School for the Deaf. Though ranked higher, the four grades used in the school for the deaf correspond to the grades tested in the other schools.

In reporting on the use of this test in the Pennsylvania Institution for the Blind and Perkins, in the November 1931 issue of *The Teachers Forum,* Miss Sargent states, "The results showed a correlation of .586 with I. Q.'s and of .755 with mental ages, as obtained in the 1923 Irwin-Hayes Binet Tests. The curves of median scores by grades, by chronological age, and by mental age all showed a fair upward trend. This was most marked in the curve for mental age. Considering the relatively small number in each mental age group, the curve and the correlation seem quite satisfactory and indicate that the adaptation will probably function well in surveys of general intelligence in classes for the blind."

The test was presented in oral form to the physically normal and blind and in written form to the deaf. The blind children were supplied with braille sheets containing the numbers of the questions and the possible answers. They were asked to listen to the questions read by the tester, to read the possible answers as they were pronounced by the tester, and to record their responses in braille on separate sheets. The physically normal children were given the test by the same tester and in the same manner as were the blind, except that they were supplied with mimeographed material containing the possible answers and requested to underscore the correct answer to each question. The deaf children were supplied with mimeographed copies of the entire test and instructed to underscore the correct answer to each question. The instructions for the deaf were given by Mr. A. P. Buchanan, Principal of the Texas School for the Deaf, who explained in detail what was to be done.

Results

The results of the test that are to be presented first include the average score made by each group and the average score made by each school grade. Following the presentation of these data an effort will be made to indicate the questions which were specifically difficult for each group of subjects and to suggest the factors making for special difficulty.

The total score on the test for an individual is the number of questions out of 40 answered correctly. Table I shows the average for each of the groups as a whole and the average for each grade tested.

It is apparent from the general averages, based on the distribution of each group as a whole, that the physically normal and blind made approximately equal scores and that both made higher scores than the deaf. The

TABLE I

AVERAGE SCORES OF PHYSICALLY NORMAL, BLIND, AND DEAF CHILDREN BY GRADES

Grade	Normal N	Normal Mean	Normal S.D.	Blind N	Blind Mean	Blind S.D.	Deaf N	Deaf Mean	Deaf S.D.
3	62	14.60	6.40	15	19.00	5.66	26	7.30	4.80
4	53	20.50	4.91	16	17.75	3.12	12	15.25	4.32
5	55	23.85	5.75	14	21.86	4.53	15	8.88	4.65
6	59	24.50	5.35	21	26.38	3.73	15	17.20	7.15
General Average	(229)	20.95	5.90	(66)	21.50	4.60	(68)	11.50	7.10

grade averages reveal that in each grade the physically normal and blind exceeded the deaf. A comparison of the physically normal with the blind reveals that blind children in the third grade made a higher average than the physically normal. The differences for other grades are less marked and somewhat inconsistent, the physically normal making higher scores than the blind in the fourth and fifth grades and the blind a higher score than the physically normal in the sixth.

The reliability of the differences pointed out above may be determined from a study of Table II which shows the critical ratios of the differences between the means of each grade.

therefore, is highly reliable, as far as chance variations are concerned. The least reliable differences shown in Table II are thus between the blind and deaf of the fourth grade and those between the physically normal and blind in the fifth and sixth grades. The other differences are relatively significant.

The degree of correspondence among the scores made by the three groups was calculated by the rank-difference method. This calculation consisted of (1) finding the percentage of correct responses made to each of the 40 questions by each group, and (2) ranking the questions according to the percentage of pupils answering them correctly. The coefficients found by this method were as follows: .85 between the physically normal and blind, .20 between the physically normal and deaf, and .43 between the blind and deaf. These coefficients indicate a striking similarity between the gross performances of the blind and physically normal, a striking difference between the performances of the physically normal and deaf, and a low degree of correspondence between the performances of the blind and deaf. From these facts it may be inferred that the deaf

TABLE II

RELIABILITY OF THE DIFFERENCES BETWEEN THE MEANS

Grade	Critical Ratios: Physically Normal and Blind	Physically Normal and Deaf	Blind and Deaf
3	2.33	5.90	6.56
4	2.66	3.10	1.03
5	1.30	10.80	7.62
6	1.75	3.74	4.30

From a standard table given in most statistics textbooks, one can determine the chances in 100 that an obtained difference is due to chance variation. Referring to such a table, one may find, for example, that the critical ratio of 3.1 for Grade 4 indicates that the chances are better than 99.9 in 100 that the mean score of the deaf will never equal or exceed the mean score of the physically normal. This difference,

have difficulties in reacting which are peculiarly their own.

The gross differences pointed out above may be partially understood by noting the manner of reacting of each group to questions which occupy certain ranks. To discover these questions, use was made of the differences between the ranks occupied by particular questions in a rank column for each group, the rank of each question being determined by calculating the percentage of pupils in each group who made correct responses. These differences were averaged, and the questions were selected which occupied ranks equal to or greater than the average deviation from the rank. This method of selection concentrates attention upon the questions to which each group reacted in a significantly different manner from the others. The questions selected in this manner comprise six groups: (1) those on which the phyically normal made relatively lower scores than the blind, (2) those on which the physically normal made relatively lower scores than the deaf, (3) those on which the blind made relatively lower scores than the physically normal, (4) those on which the blind made relatively lower scores than the deaf, (5) those on which the deaf made relatively lower scores than the physically normal, and (6) those on which the deaf made relatively lower scores than the blind. An examination of each group of questions will throw light on the differences between the various groups of subjects.

The questions on which the physically normal made relatively lower scores than the blind were the following:

13. If a person walking in a quiet place suddenly hears a loud sound, he is likely to be stopped, struck, made deaf, startled, angered.

22. A wire is to electricity as what is to gas? a flame, a spark, hot, a stove, a pipe.

23. A coin made by an individual and made to look like one made by the government is called duplicate, counterfeit, imitation, forgery, libel.

25. If Harry is taller than Herbert, and Paul is shorter than Robert, then Robert is what to Herbert? taller than, shorter than, just as tall as, cannot say which.

27. If Harry is taller than William, and William is just as tall as Charles, then Charles is what to Harry? taller than, shorter than, just as tall as, cannot say which.

31. If George is older than Frank, and Frank is older than James, then George is what to James? older than, younger than, just as old as, cannot say which.

A study of the questions above will reveal that all except No. 22 are somewhat long and complicated, especially when compared with other questions in the test. Each is introduced by a conditional clause which is followed by relatively complicated comparisons to be made and a question at the end which requires the subject to react to the question as a whole. Comparisons of the performances of the two groups of subjects may be made by a study of Table III which shows the length in terms of the number of letters of the stimulus part of each question, the percentage of subjects in each group who answered each question correctly, and the rank of each question.

It may be seen in Table III that the average length of questions in this group is 67 letters, while the average length of all questions is 47 letters with a range of 29-81. These questions, therefore, are considerably longer than the average of the test. The blind children made not only relatively higher but also actually higher scores than those made by the physically normal children on these questions. Thus it appears that the blind have greater capacity to react to long complicated questions than do the physically normal children. This greater capacity is likely in the nature of a wider auditory memory span. At least, broad differences between the two groups in the direction of superior performance of the blind are not observed in the results for shorter and other types of questions.

The questions on which the physically

TABLE III
LENGTH AND RANK OF QUESTIONS ON WHICH THE PHYSICALLY NORMAL MADE LOWER SCORES THAN THE BLIND

Question	Length in Letters	Correct Answers: Physically Normal Per Cent	Physically Normal Rank	Blind Per Cent	Blind Rank
13	67	51	13	79	8
22	33	22	38	31	28
23	70	38	29	63	13
25	80	40	27	46	22
27	81	33	32	45	23
31	70	40	21	56	18
—	—	—	—	—	—
Averages	67	37	27	53	18

normal made relatively lower scores than the deaf include Nos. 23, 25, and 27 above and the following additional one:

37. A pitcher is to milk as what is to flowers? stem, leaves, water, vase, wet.

Table IV shows the percentage of physically normal and deaf children answering this group of questions correctly and the rank of each question.

had to record their responses after hearing the questions read without an opportunity to repeat the stimulus part. Besides, it may be noted that the questions deal with concrete objects and situations, a type of material that appears to be relatively easy for the deaf to understand. Nevertheless, even though these questions are ranked highest in the column for the deaf, the showing

TABLE IV
PERCENTAGE OF PHYSICALLY NORMAL AND DEAF SUBJECTS ANSWERING QUESTIONS ON WHICH THE DEAF RANK HIGHER THAN THE PHYSICALLY NORMAL

Questions	Answering Correctly: Physically Normal Per cent	Physically Normal Rank	Deaf Per cent	Deaf Rank
23	58	29	35	12
25	40	27	35	5
27	33	32	64	1
37	47	21	42	7
—	—	—	—	—
Average	48.5	27.2	44.0	6.2

It may be observed that the deaf actually exceed the physically normal in answering only one question but that the ranks of all the questions are considerably higher than in the case of the physically normal. Thus the deaf are only relatively superior to the physically normal. This superiority is likely due to the fact that the deaf had the test in written form and hence an opportunity to re-read the questions until they were satisfied with the responses recorded. The physically normal children, on the other hand, which they actually make is poor compared with that of the physically normal and blind.

The questions on which the blind made relatively lower scores than the physically normal include the following:

10. Which one of these five things in list 10 is most like cup, plate, saucer? fork, table, eat, bowl, spoon.

19. A book is to an author as a statue is to a sculptor, marble, man, model, magazine.

28. Which one of the words in list 28 would come last in the dictionary? hedge,

glory, label, green, linen, knife, honor.

32. If the suffering of another makes us suffer also we feel worse, harmony, sympathy, love, repelled.

35. Which of the five things in list 35 is most like horse, pigeon, cricket? stall, saddle, eat, goat, chirp.

36. A book is to information as what is to money? paper, dollars, work, bank, gold.

The rank and percentage of subjects in each of the three groups who answered each of the above questions are shown in Table V.

The data show that the blind made considerably lower scores than the physically normal. It may be seen also that the deaf rank relatively lower on questions 19, 28, and 32. Question 10 was the easiest and question 36 the most difficult in the group for the blind. Question 19 was so difficult for the deaf that only three per cent of the subjects were able to answer it, and only 14 per cent of the deaf were able to answer question 28, and 19 per cent question 32. Thus both groups of handicapped children found these three questions particularly difficult. Why they found them excessively difficult is not apparent from the data. In answering question 19, the blind may have been in need of visual experience enjoyed by physically normal children. The deaf doubtless experienced difficulty for the reason that they did not know such words as "dictionary," "statue," "sculptor," and "information." A significant fact disclosed by a study of the reactions of children who answered the questions incorrectly is that in answering such questions as 10, 19, and 35 the vast majority of the subjects chose a possible answer related closely in meaning to the first and last words in the stimulus part of the question. This finding indicates that the stimuli are somewhat difficult for the physically normal and blind to keep in mind. There are doubtless other factors, however, that are not apparent in the data at hand.

TABLE V

PERCENTAGE AND RANK OF QUESTIONS ON WHICH THE BLIND MADE CONSISTENTLY LOWER SCORES THAN THE PHYSICALLY NORMAL

Questions	Physically Normal Answering Correctly		Blind		Deaf	
	Per cent	Rank	Per cent	Rank	Per cent	Rank
10	85	4	76	11	29	16
19	49	19	28	31	3	38
28	51	15	37	26	14	28
32	53	14	42	25	19	30
36	41	25	12	37	28	20
35	45	24	25	32	28	19
Averages	54	14	37	27	20	25

In addition to the question indicated above, the deaf made considerably lower scores than both the physically normal and blind on the following:

2. Which one of these five words means the opposite of strong? man, weak, small, short, thin.

4. Which word in list four means the opposite of pretty? good, ugly, bad, crooked, nice.

6. Which word in list six means the opposite of sorrow? sickness, health, good, joy, pride.

13. If a person walking in a quiet place suddenly hears a loud sound, he is likely to be stopped, struck, made deaf, startled, angered.

21. If we believe someone has committed a crime, but we are not sure, we have fear, suspicion, wonder, confidence, doubt.

The manner in which the three groups of subjects reacted to the above questions is shown in Table VI.

TABLE VI
PERCENTAGE AND RANK OF QUES TIONS ON WHICH THE DEAF MADE RELATIVELY LOWER RECORDS T HAN THE PHYSICALLY NORMAL AND BLIND

	Correct Responses					
	Physically Normal		Blind		Deaf	
Questions	Per cent	Rank	Per cent	Rank	Per cent	Rank
2	83	5	85	4	29	14
4	86	3	86	3	25	22
6	76	8	83	6	10	35
13	51	16	79	8	12	34
21	47	22	47	20	17	31
—	—	—	—	—	—	—

On questions 2, 4, and 6, which involve opposites, the physically normal and blind made some of their best scores and the deaf their poorest scores. It may be seen that only 29, 25, and 10 per cent of the deaf answered each of the questions respectively. Question 13 describes a situation in which hearing would be involved. Only 10 per cent of the deaf children were able to react correctly. Question 21 describes "suspicion." Only 17 per cent of the deaf were able to respond correctly, and 47 per cent of the physically normal and blind.

It is possible that the deaf failed to select the opposite word called for in each question for the reason that they didn't understand the word "opposite" in the stimulus part of the question. The other two questions, it seems, deal with items outside of the range of experience of the deaf.

INTERPRETATION OF RESULTS

The foregoing data indicate numerous differences among physically normal, blind, and deaf children in the manner in which they react to questions on a test. They also reveal, to some extent, the nature and amount of difference in each instance. The data do not show, however, why the differences occur. We shall now try to discover some of the causes underlying the differences observed. To do so will require the making of inferences which may be little better than speculations, though information from other sources may assist in understanding the results.

Differences in Intelligence

Since the Otis test is intended to measure native ability, and showed a high correlation with the 1923 Irwin-Hayes Binet tests as reported by Miss Sargent, it is important to inquire whether the equality of scores made by the physically normal and blind indicate equality in intelligence and whether each group is markedly superior to the deaf as the scores indicate. One consideration alone is sufficient to indicate that the scores presented do not represent adequate measures of the intelligence of the groups tested. The physically normal children were as much as three years younger than the blind and deaf, their average chronological age being 10.5 years and that of the blind and deaf 13.5 and 13.8 years respectively. This means that both the blind and deaf are to some extent inferior to the physically normal in intelligence, in so far as that factor is represented by grade placement. Pintner observes that deaf children are from two to three years retarded when compared with physically normal, and that blind children occupy a status midway between the physically normal and deaf. This observation is based on a nation-wide survey of deaf children by means of the Pintner Non-Language Test. If we assume that the difference found by Pintner obtains in the groups tested by the Otis test, the similarities and differences pointed out are due to other factors than intelligence. On the Non-Language Test, the groups in this study should

have made approximately equal scores, for they have similar grade placement and they differ in chronological age sufficiently to make up for native differences. Thus the difference in scores obtained can not be attributed to differences in native ability.

Language Differences

The clear superiority of the physically normal and the blind to the deaf is due primarily to the language handicaps of the deaf. Many of the latter subjects were so deficient in reading and in understanding the relationships involved in the questions that they were able to answer only a few questions. Failure of many deaf children to understand the question or the thing to be done is evident from the data in the failures to record their responses, the distribution of responses made by different individuals over all of the possible answers, and the choice of answer unrelated to the questions. Even the poor showing of the deaf children on opposites seems to have been due to their ignorance of the word "opposite" in the questions, and the peculiar difficulty in dealing with sequences appears to have been due to their failure to understand the implications of the word "dictionary" as used in the questions. The fact is many words and expressions appear in the test with which the deaf children were unfamiliar. Knowing this in advance, the Principal and teachers in the Texas School for the Blind warned the tester that the children would be unable to deal with the test in an adequate manner. It has been estimated that the deaf are retarded about five years in language.

Differences Due to Sensory Handicaps

The original purpose of giving the Otis test to physically normal and handicapped children was to determine the part played by deafness and blindness in limiting their reactions. The most conspicuous by-product of deafness is the inability to understand language. The obvious inability of the deaf to understand the questions which make up the test makes it impossible to estimate any other effects of this sensory handicap. Ordinary observation seems to support the idea that the physically normal and deaf should be more alike than the physically normal and blind. The correlations and other data secured by this test, however, indicate that they are more unlike, even than the blind and deaf. These facts appear to emphasize the importance of hearing in the acquisition of language. Without it the language equipment of an individual is strikingly inadequate. For the most part, the deaf children who have once heard or those who are partially deaf make better scores on such tests as the Otis and likewise faster progress in school than those who have never heard.

Blindness, on the other hand, appears to offer minor obstruction to the acquisition of language. Just how far the blind may lag behind the physically normal in language achievement is not known, but the results of this test indicate that the difference between the two groups is not great. Some words requiring visual imagery present difficulties for the blind, no doubt; but the understanding of abstract relations, such as those included in this test, seems to depend on other factors than visual sensory impressions. It appears certain that language forms acquire meaning for the individual regardless of available sensory data of the visual type. Thus the blind are different from the deaf in the acquisition of language because the deaf from birth are cut off from "word" language until purposively taught, while the blind receive language stimulation from birth on. This difference indicates, then, that the ability to respond to abstract language forms depends upon associative and integrative processes initiated by auditory stimulation rather than upon such processes initiated by visual stimulation. Thus language forms appear to acquire meaning chiefly by being brought into word context. Sensory data are essential as a starting point and often add quality and richness of meaning to particular words, but the chief source of meaning is the language context

in which words are variously used. In fact, the blind and deaf acquire numerous meanings without ever experiencing in a concrete form the object or situation to which the meanings have reference.

Special Difficulties

It will be recalled that the most difficult questions in the test are those classified as analogies; that physically normal children were poorer than the blind on this type of question. The analogy is specially difficult, it seems, for the reason that it requires the subject to attend to a number of items at once while he is forming the required relationships. Question 36, for example, states, "A book is to an author as what is to money? paper, dollars, work, gold, bank." It will be observed that the subject must attend to three words, "book," "author," and "money" and their relationships, and he must keep the question initiated by the word "what" in mind while he is mentally searching for the one word in the list of five which fits into the problem. Thus analogies are difficult because they demand of the subject a reaction to several items at once, which must not only be attended to but held in mind and compared with or related to several other items, including the words furnished as possible answers. The subjects who missed such questions gave as answers the words that refer to the first and last items in the main part of the question. For example, in answering Question 36 above, "paper" and "dollars" were chosen more frequently than the other possible answers. The blind were better able to deal with this type of question because they have had more practice in reacting to oral stimuli of this complex type, a type of practice which appears to have provided them with a broader auditory memory span.

The questions which proved difficult for all three groups of subjects apparently demand relationships which are difficult for them to determine. Question 20, for example, reads: "Order is to confusion as what is to war? guns, powder, thunder, army, peace." Only 18 per cent of the blind children, 28 per cent of the physically normal, and 12 per cent of the deaf were able to answer this question. Such questions appear to demand relationships which are not apparent to the children.

Other questions were difficult for the reason that the subjects were limited in experience in dealing with the items or objects involved. Such a problem as, "A coin made by an individual meant to look like one made by the government is called duplicate, counterfeit, imitation, forgery, libel" is difficult, no doubt, because the subjects were unfamiliar with the type of thing being discussed.

Another factor causing special difficulty is the inability of the subjects to distinguish between words closely related in meaning. This factor appears to be operating in the responses to such questions as No. 21 which describes "suspicion." The incorrect answers furnished are "fear," "wonder," and "doubt." The subjects, for the most part, chose "wonder" and "doubt" most frequently, possibly because the words are closely related in meaning.

Behavior Differences

The superior showing of the blind children in the third grade appears to be due in part to their superior ability to pay attention to oral stimuli. In testing physically normal children in the third grade, considerable difficulty arose in getting and keeping their attention. It was necessary to ask them to give attention to each question and to caution them against speaking out, giving the answers verbally, and so on. There were numerous requests for repetitions of various questions. No such difficulties were encountered in testing blind children in the third grade. Pupils remained perfectly quiet while the question was being read, and requests for repetitions were infrequent. In testing physically normal children above the third grade, difficulties in getting and keeping attention were slight. These children apparently had undergone a type of development in the third grade which

prepared them to attend better in the following grades. Hence, it appears that the superior showing of the blind was due in part, at least, to their superior habits of attention. Nevertheless, in all of the grades, blind children seem to have been better listeners than the physically normal.

An outstanding characteristic of the behavior of deaf children while taking the test was their unwillingness to attack problems without help. Several of the subjects, in spite of the instructions to the contrary, sought the aid of the tester. Many of them seemed to give up before they started, making a hasty decision that they were unable to deal with the question. This type of behavior is perhaps a product of the type of instruction received by the deaf. In their school, instruction is highly individualized. The classes are small and the help of the teacher is practically always at the disposal of the individual pupil who seeks it. Thus they have apparently developed a feeling of dependence or helplessness which prompts them to seek aid on problems which they might be able to solve without it. In this respect they reacted in a manner very different from the physically normal and blind.

Summary and Conclusions

The results of the Otis Classification Test, given to physically normal, blind and deaf children of similar grade levels, appear to justify the following conclusions:

1. Physically normal and blind children make approximately equal scores and both make higher scores than the deaf.

2. In each of the grades, the physically normal and blind exceed the deaf by significant amounts, and the blind exceed the physically normal in the third grade.

3. A correlation of the scores by test items results in finding the following coefficients: .85 between the physically normal and blind, .20 between the physically normal and deaf, and .43 between the blind and deaf.

4. An analysis of differences in reactions to questions particularly difficult for each group indicates (a) that blind children have greater capacity than physically normal to react to relatively long questions; (b) that the deaf are superior to the physically normal only on the few questions particularly easy for the deaf; (c) that questions classified as analogies are specially difficult for all three groups of subjects.

5. Interpretation of the findings seems to justify the following inferences: (a) that the similarities and differences revealed by the gross scores are not due altogether to the factor of intelligence; (b) that the chief differences between the physically normal and blind and the deaf are due to the language handicaps of the deaf; (c) that ability to react to abstract relations depends upon meaning accruing from the use of words in context rather than upon meaning accruing from a particular type of sensory data, though audition is the most important sensory avenue for the mastery of language; (d) that particular questions are difficult for all types of subjects when they are complicated in structure and when they contain words or ideas beyond the range of the experiences of the subjects; (e) that the blind children, especially those of the third grade, have greater capacity to attend to materials presented orally than do physically normal children; and (f) that deaf children are hampered in reacting to various situations by their unwillingness to attack problems without help.

In *The Beacon* for July, 1936 we find under the heading "Technical Training" a report of a speech given by Dr. Underwood which deals with the philosophy of vocational training as given in the English schools for the blind. The speaker stated that the object of training was "to produce an all-round craftsman in a particular trade which he should be able to follow in any workshop in the country no matter where it was or in what variety of products it specialized."

DOCTOR ALLEN SAYS:

"The study of the unusual child has produced an influence upon the teaching of the normal child that is illuminating, instructive and inspiring."

—*Francis Burke Brandt.*

A wise old pedagog, after visiting a class of blind boys, said: "I would urge every teacher of children to observe here and at other special schools. I would even recommend normal school instructors to do so. Even a single visit could not but broaden their pedagogical outlook. The hour I have just spent with you has been a revelation to me. I never listened to a more interesting class."

Soon after writing in 1900 my "Education of Defectives," in preparation for which I had both read widely and visited every institution for the deaf and for the feeble-minded within a hundred miles of Philadelphia, also those in Washington, I began encouraging my teachers to inspect our near-by special institutions, and inviting the superintendents of them to describe their methods to us. A talk on the sign language of the deaf with demonstrations in it of familiar selections like the Lord's Prayer, was illuminating indeed to most of my staff. So too was an explanation of just why a community of the feeble-minded is the happy valley it can be and why its grown children are so distressed to leave it. Our meetings soon developed into bi-weekly courses at which my teachers in turn presented papers on some self-chosen theme in the history of our own specialty. The papers themselves, typed, put into covers and spread on the great table in our "Managers' Parlor," along with every incoming report from schools for the blind, formed the nucleus of the present Overbrook blindiana library.

These meetings continued until 1910, when my successor, finding no time for the personal leadership the success of such extra enterprises requires, reluctantly but wisely stopped them. (A list of the subjects treated within the several seasons of the course appears in his annual report of that year 1910.) He kept on diligently gathering all germane literature, however, and, in the 1920's, had enough of it to supply the required reading on the education of the blind for his broad and comprehensive course in home teaching then begun.

Invaluable suggestions for educational advancement have come from the teaching of special youth:—far more than is commonly recognized. Burnham, in his *The Normal Mind* (p. 262) says: "Manual training, positive discipline, mental hygiene, vocational guidance, nutritional hygiene and active education, largely began with the feeble-minded and defectives and were extended to the schools for the normal." Now Director Johnstone had entertained me often at his Training School in Vineland, New Jersey (where, by the way, I had made the happy placement of a blind girl who is still after more than a quarter of a century on the music staff there); and when in 1903 the program making of the Department of Special Education of the N. E. A. fell to me, I had that lifelong educator, Frank H. Hall, then superintendent of the Illinois Institution for the Blind, come on to treat briefly the topic "The Influence of the Study of the Unusual Child Upon the Teaching of the Usual." Since then I have at various times and places urged candidates for the doctorate degree to take this topic as a rewarding one for a thesis. But, so far as is known to me, it has never been adequately so used. Since normal development in youth is more and more recognized as a problem of some complexity, we may be confident that some day we shall have such a thesis as an important historical link in the still lengthening chain of educational method.

STATION K O S B

Mrs. M. M. Lee

For several years I have occasionally used a special device to provide an audience situation for oral reading. A microphone was improvised on the teacher's desk. The reader stood behind this and read to the class.

It worked as a reading device! In fact, the idea became so popular that the program is now a regular Friday afternoon feature and the school room is then a "real broadcasting studio," with a "real microphone" made of two paper plates and a broomstick.

The Kindergarten group from another room is now included with the First and Second Grades at this hour. The entire program, even the announcer's patter is impromptu.

One specially gifted boy (10 years old) is the regular announcer; others serve occasionally to "learn how."

The announcer tells you, "This is station K O S B and it is now 1:30 P. M., Central Standard Time, the hour for the 'Kiddies' Review'" (their own name for the program).

There are regular features: Music by the Rhythm Band, the Weather Report, News Flashes, "The Fun Makers," a group that tells jokes and riddles, even the advertiser, as well as solos, duets, choruses, readings, poems, stories and book reviews.

The children take it all quite seriously and perform as if before a real microphone. The teacher has no part unless called upon.

The value of such a program is inestimable. It is more than a device. It utilizes a life situation and awakens in the child a desire to use good English, to ask and answer questions courteously, to be self-reliant and helpful in arranging the room in preparation for the program, and to do something to contribute to the enjoyment of others.

A TYPICAL PROGRAM

Announcer: This is Station KOSB. It is now 1:30 P. M., Central Standard Time and the time for the "Kiddies Review." Good afternoon folks and Kiddies! I am glad to be back with you all again and I want to thank Elvin for taking my place while I had chicken-pox. I am glad to see so many of you back, too. We will open our program with a number by the Rhythm Band, the "Shoemaker's Dance."

Now we will hear a story told by Dale. He will announce the name of his story.

Dale: The name of my story is "Fairy Fox."

(Tells story)

Announcer: I'm sure we all liked Dale's story. Now here is a little bit of a girl. She's just about half as tall as I am. She's just six years old, but she's not very big. Let's all keep nice and quiet now while Gerline sings for us.

Gerline: The name of my song is "The Old Spinning Wheel."

(Gerline sings)

Announcer: Now that was fine! You know what I believe! I believe the little folks (kindergarten) are beating us big folks (second grade).

I want to tell you folks something. It doesn't matter so much what you *do* on the program, but it does matter how well you do it.

Now is there anyone else who would like to sing for us? All right Mackie, you come right up here and announce the name of your song.

Mackie: I shall sing, "George Washington."

(Mackie sings)

Announcer: Thank you, Mackie.
This is station KOSB, Muskogee, and we will now hear the News Flashes by our reporter, Elvin Brown.

Elvin: Good afternoon, I am glad to be with you again to bring you the news of the week.
This week a man from New York came and talked to us in the auditorium about the work for the blind people and today we had another talk in chapel by a man who has been a missionary in Korea.
In our room we have been making some Nature Study Books. We have already made some Health Rule Books. Mrs. Lee has been reading "The Burgess Seashore Book" to us.
Billy Colleen's Mother came to see her this week, and we know Billy Colleen was glad. She brought her some new shoes and she is "sitting on top" now. I imagine she brought some eats too.
Paul had a birthday last Tuesday. We hope he has a lot more.
The robins are back so we know spring will be here soon.
My time is up so I will say "Good-bye."

Announcer: The Rhythm Band will play "Amarylis."
(Band plays).

Announcer: Ruby Jo will tell us a story. This little girl is smiling so I know she is happy and that she has a good story to tell.

Ruby Jo: My story is about "The Sparrow and the Cowbird."
(Tells story).

Announcer: Well, that was good, I thought. I think Elvin has a xylophone piece for us. Come on up here, Elvin.
(Elvin plays).

Announcer: Say, Elvin, I want to ask you a question. Isn't that the same piece you played last Friday? (all laugh) That's all right, though. He's learning to play the xylophone and we hope he gets to be a real good player, don't we folks?
Now we will hear the weather report.

Bob: The News Reporter told you spring was coming because he had seen some robins. Well, we have been having some pretty sunny days, but winter has not gone away yet. It was pretty cold last night and some of us had to have more blankets. I know I did. But the sun is shining, I don't think this cold will last long. I think spring will be here soon because the boys are beginning to spin tops.

Announcer: Here are two little girls that are going to sing for us. I don't know what their song is, but I'm sure we'll like it.
(Imogene and Edith sing).

Announcer: Now, I am going to ask Mackie to read for us out of her library book.

Mackie: The book I am reading is *How the Animals Came to the Circus* and the story I shall read for you is "Silver Tail, a Circus Horse." (Reads).

Announcer: How many enjoyed that?
Everybody did, I'm sure! Mackie is a good reader and that is a good story.

Announcer: Now we will hear a poem by a little boy named Delbert. The name of his poem is, "Guess What I Have In My Pocket."
(Delbert reads poem).

(*Continued on Page* 17)

RESEARCH CONDUCTED AT A SCHOOL FOR THE BLIND

Mention was made in the May issue of *The Teachers Forum* of the many investigations which are being conducted at the Ohio State School for the Blind in the field of the education of blind children. Below is a list of the studies which have been completed.

THESES

1. *Eugenic Aspects of Hereditary Blindness.* A study was made by Miss Bertha Andrew of Ohio State University in cooperation with the Ohio State School for the Blind. Miss Andrew was in the graduate school in the department of heredity.
2. *Alumni Survey of the Ohio State School for the Blind.* Cooperatively worked out by the alumni of the School. One of the most comprehensive studies of the kind. Contains invaluable information for those charged with the responsibility of educating the blind.
3. *Vocational Instruction in Residential Schools for the Blind.* A somewhat comprehensive study of industrial arts subjects now taught in schools for the blind, stressing the vocational aspects. Suggestions and recommendations are made.
4. *The Regimen of Residential Schools for the Blind.* This study is by a mature graduate student of Ohio State University. It is an interpretation of results of questionnaires, bulletins, records, etc. of all schools.
5. *Physical Education for the Blind Child.* This thesis is written by a mature graduate student in the physical education department of Ohio State University. The study is based upon questionnaire results, reports, studies and actual experience with both sighted and blind pupils.
6. *Evaluation of Courses of Study in Schools for the Blind.* The study was prepared by a mature graduate student and former superintendent of public schools. It is a course survey and comparison of courses, texts and methods in blind and seeing schools.

STAFF STUDIES

The following topics have been studied by committees of the staff and have been presented at teachers meetings:

1. *The Educational Advantages of a General Shop Course to the Blind Child.*
2. *Practical Results of Clay Modeling.*
3. *An Evaluation of Devices for Teaching the Blind Child.*
4. *What Are We Doing for the Older New Pupil?*
5. *Methods of Curriculum Revision.*
6. *The Problem-Project Method of Teaching General Science in the School for the Blind.*
7. *An Interesting Experiment.* This concerns the sight saving children who live in our school and attend public school classes.
8. *Socializing the Blind Pupil in Residential Schools.* This deals with the results of our pupils attending Sunday Schools, their activities in clubs in the cities, and inter-relation of the pupils with the boys and girls of the city.
9. *Citizenship.* A comprehensive course of study by a staff committee. This course covers years 1 to 8.
10. *Is the Residential School really a Home for the Blind Child?* Discusses the shortcomings of this phase of the residential school and points the way to ideal situations.
11. *The Leisure Time of the Blind Pupil in the Residential School.* A distinct contribution to the literature on this very important subject.

(*Continued on Page* 17)

EARLY PROBLEMS IN TEACHING READING TO BEGINNERS

JOSEPHINE LIPPA

It is true that reading gives a child happiness. He is not a permanent fixture in the world of make-believe and the opportunity to learn to read is as happy and serious an occasion as his other experimentation. Nevertheless reading is more difficult for some children than for others whether blind or seeing.

Since reading cannot be forced into but is led out of an individual it is well to know when reading can be presented. Many difficulties are thereby eliminated from the process of learning to read.

A careful testing of the beginner for a reading-readiness age of six or six and a half years should be given. This, however, is not sufficient. A child may have reached that mental requirement and show a real interest for learning to read yet find his progress slow and discouraging. This may be due to lack of experiences or language difficulties. Listening to, dramatizing and retelling stories increases vocabulary and emphasizes understanding. Planning trips and occasions will stimulate imagination, initiative and oral expression, which will aid in the mastery of the oral sentence. Later he finds this sentence idea in the written arrangement.

Reading should be like talking and talking is done in sentences. Language, science and many other periods through the school day afford opportunities for sentence expression. The mastery of the sentence idea is also a good means for training the attention to follow ideas consecutively.

The pupil who is ready for reading will accept its presentation eagerly and alertly. Even then it is found that all can not progress at the same rate. Physical vitality and interest span vary. To use any time, much or little, while interested and unfatigued is essential. There are then no regrets lingering to make the pupil uncomfortable and a love for reading is established. In my opinion books are like friends and to love reading is of vital importance. Those who are more determined and concentrate more efficiently, who have keener minds and imagination should be allowed to proceed according to performance. They will leave those of other levels still happy and learning up to their abilities. Therefore, grouping the pupils clears many discouraging reading problems and harmful retarding effects.

But what about the actual performance of reading with the hands! The pupil is taught to see with his hands much in the same way the seeing child is taught to be more observant. At this time the teacher may anticipate more trouble than the pupil is aware of. She must remember that seeing by touching is admittedly slower. The pupil must learn how to train his hands to do their task together in a friendly manner—one hand cannot crowd the other nor fall below the pattern.

There will be two kinds of lessons, one for the fingers and one for the mind. The mind which has supplied the sentence will also guide the finger work; the brailled sentence will provide the means to read the thought. The thought cannot wander for a single moment from the braille commanding the hands to perform accordingly. Thus these two go well together—thinking and doing. As soon as the pattern of a braille sentence is understood the child begins in a small way to become a reader. Whatever fumbling the pupil may do with his untrained fingers he will still keep in mind the subject matter presented.

The first sentences comprise reading charts tho not in the true sense of the word because he is not asked to recognize any specific words or letters. It is rather an unobtrusive reading activity while learning good use of hands in a persistent and

organized manner and while learning to associate a thought with its written pattern. He learns what a fine thing it is to read and is thus satisfying the need for his age. Gradually these rote charts assist the pupil in familiarizing him with such mechanical ideas as movement, line direction, spaces, lengths of lines, words and even, perchance, shapes of letters. He is acquiring a sense of touch equivalent to eye-span and muscular co-ordination and control. The following are a few of the rote charts suggested by the pupils:

My rabbits eat carrots.
They eat lettuce, too.
Dicky is our canary at school.
He likes seeds.
Warren has a pet turtle.
Its name is Tubby.

One day to gratify a wish a very little First Book was made in the handwork period. On desired pages the teacher printed and pasted brailled sentences prompted by the pupil. The book follows page by page:

This is my book.
I made it.
It has four pages.
I can read in it.
This is the end.

Nicholas Di Caprio, the owner's name, was printed on the cover.

This rote reading activity proves its value by holding the interest of the pupil while he is learning to understand the power of his hands. Its written form gives him the opportunity to learn more about the position of phrases and words in sentences as, at the beginning, end, after, next to, before, near, etc. The frequency with which he meets certain words in his charts provides a basic reading vocabulary which he will find when presented with his first primer. The frequency with which he meets this basic vocabulary provides the repetition necessary without too exacting drill on any one chart.

All the words on a chart are not necessarily learned. Some may be purely supplementary, being particularly related to that chart and too difficult to learn at that time. Others are thought words to be read aided by the content of the sentence. They are also within his understanding. In the chart

Bunny was running.
He saw something with his two bright eyes.
He heard something with his two long ears.
He smelled something with his one little nose,

the words eyes, ears and nose are new words but are clearly suggested by the content of the sentence. Children can be taught early in their learning to read that many words and phrases in books are there just as they themselves might have written them. To read them unaided by the teacher will give him confidence, teach him independence, and establish good content reading.

As the pupil becomes more skillful with the use of his hands he is more aware of particular shapes of letters. He will do this with correct pressure and without strain. His fingers have been trained gradually to note finer differences and likenesses. He is now ready and anxious to learn names of letters.

The pupil has learned to associate sounds with certain shapes and outstanding terms. Ball, bell, boat, boys, balloons made the letter "b" very prominent. But he notes that the same words have different endings or other outstanding characteristics. The two "ll's" in ball are readily learned. Each letter begins to stand out clearly and such synonymous terms as short boy for letter "b," tall, straight boys for "ll's," open gate for "k" are discarded for correct names of letters. However, there is no particular need to learn names of letters until the basal reading vocabulary is acquired. There is some danger at this stage when the pupils desire to examine too closely each letter. This should be discouraged as the trend of thought is forgotten, and slow, poor reading is apt to result. The eager ones, if otherwise ready for it, can be introduced to the slate and stylus and learn to make pictures

of these same interesting letters. But that in itself is a good story which can have no place here. Yet there is no reason why the names of letters should not be told if it be the propitious time to do so. Verily, the teacher must know her pupil.

Many good readers do not know half the names of the letters—others equally good know all their names at finishing a primer. Names of letters are not aids to reading. Their sounds associated in new and old words are the informing factors. Bright pupils are able to pronounce the whole word as soon as they look at the beginning or end —or both—of a word. The duller pupils need more aid. They will proceed to sound more deliberately.

There are two methods of sounding a word; the initial blend as *sa*nd and the final blend as s*and*. It seems more natural and is more effective to use the initial blend method because the sound *sa* suggests the rest of the word. All of us do this more or less expertly simply by noting these similarities in the course of our reading.

Needless to say, a phonic drill, if given at all, is entirely separate from the reading lesson. It is used to learn to recognize such aids as diphthongs, blends and consonant and vowel digraphs.

In conclusion, if a child is mentally ready, placed according to ability level, and has learned the proper use of his hands for reading, the test of this method is in the way it functions in fostering a love for reading and in adding to the pupil's ability to use supplementary reading.

(*Continued from Page* 13)

Announcer: It is time for the Fun Makers so we will hear from them. Come on up here, you four jokers!

The Fun Makers:

Betty: If a man saw five birds on a tree and shot two, how many would be left?

Imogene: Three.

Betty: (laughing) There wouldn't be any, because the others would fly away.

Bob: What has three feet but can't walk?

Betty: A wheel barrow.

Bob: No.

Betty: I give up.

Bob: A yard stick!

Elvin: A duck before two ducks, a duck behind two ducks, and a duck between two ducks, how many ducks in all?

Bob: Nine.

Elvin: No.

All: We give up.

Elvin: Three.

Announcer: This closes our program for today. Next Friday afternoon you will hear us at this same hour, so please tune in. So "Good-bye and Good Luck, Paul Kelly speaking."

(*Continued from Page* 14)

12. *The Health of the Blind Child.* An illuminating study made by our health staff after several years of careful investigation. The following staff members contributing to this work: the ophthalmologist, the medical doctor, the dentist, the dietitian, and the school nurses.
13. *Industrial Arts Education from the Viewpoint of the Teacher.* This is different and is very much worth while for the administrator.
14. *Character Instruction in Residential Schools.* This is an outstanding study and presents a very constructive program. This study also evaluates character tests and suggests how they may be profitably used for blind children.

15. *Development of Personality in the Blind Child.* A constructive program is offered. This study also gives results of the use of personality tests and evaluates such tests.
16. *How the Graduate of a School for the Blind May Adjust Himself to Society.* This particular study has been made by blind pupils, teachers of blind pupils and social workers.

THE TEACHERS FORUM
for
Instructors of Blind Children

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The Editor will not be responsible for opinions expressed in signed articles.

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A MATRON'S PART IN A SCHOOL FOR THE BLIND

GORDON HICKS

The Editor has asked me to give my conception of a matron's importance in the successful operation of a school for the blind. He reminds me that I have had the viewpoint of pupil, teacher and superintendent. This, I suppose, is his reason for delegating to me this task, though I am not at all certain it provides sufficient knowledge in my case to make this article worthy of consideration by *Forum* readers.

For the purpose of this article we will consider the term matron to mean the person on the school staff who has the household department in charge. I know that in some schools this is not the title given to this officer. Often we find those people having direct supervision of pupils in the cottages or dormitories bearing the title of matron. In the present case these officers are responsible to the matron.

In thinking back over my school days I find myself trying to remember the names and characteristics of the several matrons with whom I came in contact. While it is easy for me to recall with ease the names and personalities of teachers, I am quite sure I cannot recall even the names of some of the people who served the school as matron. This fact makes me realize that I had little opportunity to know these women while a pupil. Those whom I can recall are outstanding as having been especially desirable or otherwise because of what they did or did not do to make my meals and other hours of the school day pleasant. One or two of these good women whom it was my good fortune later to know would now be entirely unappreciated were I to depend upon my knowedge of them as a pupil. Bearing this in mind, I believe we should consider it a very important part of the matrons' duties to know the boys and girls socially. This is not an easy thing to bring about as some of her heaviest and most taxing duties fall at times when pupils are free to meet her socially. However, if the pupils can get closer to the matron they will benefit from a better understanding of her, and she will find larger usefulness in a personal interest in them. There is nothing more important to a growing boy (and I think it is probably nearly as true of a girl) than what he has to eat. The matron stands as the one responsible in his eyes for this essential part of school life, and therefore he is interested to know more about her. She has this advantageous relationship to begin with, and if she is wise she will use it to gain the respect and liking of the student body.

The matron has many unpleasant things to do, some of which are bound to ruffle. If the boys and girls know her, she will be assured the support of the majority of pupils if they realize she is working for the best interests of the school. Where the organization provides contributory service on the

part of pupils in the dining room as in washing dishes, waiting on table, etc., the matron will find some of her largest returns as well as her most difficult problems. One who can instill into pupils a feeling of having an important part in the efficiency of the kitchen and dining room will teach a lesson of lasting usefulness. Indeed I believe she should be credited with doing something just as important as anything to which the classroom teacher can point with just pride.

Perhaps the point at which the test of a successful matron is most likely to occur is in her relationship to the rest of the staff. Her position as head of the household department assures her the cooperation of the other members of that department, at least if she is at all competent. The set-up of most schools, however, does not give her this advantage with the rest of the staff, particularly the teachers. It sometimes happens that the matron and her associates form such a separate unit of the school family that there is little opportunity for understanding, and there may be even distrust on the part of teachers. It is said more or less truthfully that the way to a man's heart is through his stomach. The majority of our teachers and officers are women, and so I paraphrase this saying to read "the way to a woman's stomach is through her eyes." I say this with the feeling that the dining room is the best place for a matron to get the respect of the teachers. Her relations to the faculty are largely determined by her knowledge of and interest in what people like to eat and how it is served. Touches here and there which cost little or nothing and yet carry with them the apparent effort on the matron's part to make each meal a pleasant experience will evoke hearty appreciation from all. Flowers in season on the tables, arranging meals so there is no sequence in menus, the best table service that can be provided under the budget, and above all her personal interest and supervision—all these point to the successful conduct of the household. We all know how large a part for good or evil a meal may have in any situation involving a group of people. Many times after the stress of some unpleasant happening which has seemed about to cause serious dislocation, I have noticed the matron could bring things back quickly with an especially good dinner, or just the right kind of a party.

A matron in her relations to teachers must be aware that she serves first the school as a whole. Coddling of either pupils or teachers is a mistake regretted by more than one well-intentioned soul who has a mistaken sense of value. While the dining room is the place where the matron can be respected and admired for her efficiency, it is also the place where she can make fatal mistakes. Fussy appetites, grumbling, tardiness, and lack of consideration are too often present in any group of people. The matron must be impartial and entirely just in her dealings with these traits, if she is to retain the liking and respect of those whom she serves. She must never permit herself to stand in the light of doing for teachers things which she knows are unwise from the standpoint of the administration. Teachers must realize that if their interests at any point conflict with those of the school as a whole, no wish to be popular will intervene to prevent the matron from carrying out the course of action calculated to serve the school. She must be on guard as to the granting of special favors. Sometimes these requests are reasonable, and have origin in entirely good ground, but because of the special conditions have little to recommend them where the interest of the whole group is to be considered. A curt refusal may mean dissension and unpleasantness, but a quiet explanation is likely to preserve the good opinion of even the most persistent seeker after special consideration.

Health of the school family where it is entrusted to the matron is one of her most important responsibilities. She must be able to distinguish between providing all needed health supervision and attention on the one hand and on the other, to discourage in

both pupils and parents the feeling that they need only to say the word and the dentist or doctor is eager to wait upon their every ache or pain.

I believe any superintendent will say that the matron of his institution is one of the most important of his helpers. No one person in the organization can do more to build up the right kind of attitude on the part of both teachers and pupils, or on the other hand do more to make for dissatisfaction and non-cooperation. It often happens that she can do more than the superintendent to make things run smoothly. Her ear is close to the ground at the point where cheers and brickbats are most plentiful. If she is made of the right stuff she knows what to treasure and what to forget; she knows what to pass along to the administrative head, and what to let him find out for himself.

Lucky is the institution having the services of a woman who can take with a smile all the blasts of peevish discontent, and who can still keep her poise when praised to the skies by those who are at the moment pleased with some pleasant nonessential. She has a big part in the education of every boy and girl in the school, and she will, if she is the right sort and has the opportunity to show her worth, be remembered with everlasting gratitude by all the school family from superintendent down to the smallest child.

FOUNDATION LIBRARY

The Teacher of the Blind continues to print those immensely helpful articles on the teaching of geography by Leonard Hardcastle. In the May and June issues the subtitle is "The Structural Basis of Modern Geography, I and II." The subject discussed in the July number is "Biological and Human Geography, Mathematical Geography and Cartography." The author states his purpose in writing these articles as being "to cover the main principles governing modern geography, bearing in mind the enthusiastic young teacher." From here he plans to go on to giving actual teaching hints, commencing with England and Wales, then Scotland and Ireland. Europe will be given in outline and finally the application of the climatic basis will facilitate the geography of the countries of the other continents.

The difficult question of teaching geometry to blind students is dealt with in "Geometry—With Modern Improvements" by James H. Collins found in *Light* for July, 1936. In this article is told the story of how a blind boy of fourteen was able to make for himself geometrical appliances that so facilitated his study of the subject that he was able to obtain a rating of "A" for geometry in competition with sighted students.

A most successful convention of the A. A. I. B. was held at the school for the blind, Raleigh, North Carolina, during the latter part of June. A complete report of the papers given at the meetings is contained in the proceedings just recently published. This book is an excellent addition to those books, already available, on work for the blind.

Superintendent G. E. Lineberry of the North Carolina School for the Blind was elected President of the A. A. I. B. for the 1936-38 biennium.

Our Contributors

Dr. B. F. Holland, a frequent contributor, is an instructor in the department of educational psychology of the University of Texas.

Mrs. M. M. Lee is a teacher in the primary department of the Oklahoma School for the Blind.

Miss Josephine Lippa is an instructor in the braille class, primary department, of the Cleveland Public Schools.

Mr. Gordon Hicks, who has contributed the editorial for this issue, is the Principal of the Connecticut Institute for the Blind.

The Teachers Forum

FOR

INSTRUCTORS OF BLIND CHILDREN

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THE PLAY'S THE THING! A DISCUSSION OF DRAMATICS IN SCHOOLS FOR THE BLIND

BETTY MCGUIRE, M.A.

"Well, girls and boys, I have a surprise for you. We're going to put on a Christmas play to welcome old St. Nick this year!"

What a magic effect such an announcement has upon any roomful of second or third graders! Little faces brighten, sagging shoulders straighten, and the atmosphere is suddenly charged with expectancy. Every child clamors for a part in the Yuletide play. Try a similar announcement in any grade from first to eighth, and the same magic effect will be produced.

And suppose you are a high school teacher. If you wish to become exceedingly popular with those listless, hard-to-interest students in their early teens, just say to them some sub-zero morning in February:

"I have decided to let this class present Shakespeare's *Romeo and Juliet* this spring. The principal parts will, of course, be given to those who do the best work in English during the next month."

Overnight your pupils will change into a class of exemplary students. For these adolescent girls and boys are just as eager as their younger sisters and brothers to display their histrionic ability. They all see themselves as potential Catherine Cornells and Clark Gables.

This urgent need of self-expression through the medium of the play is just as keen among the pupils of our schools for the blind, as among those who see. Indeed, judging from my own experience and observation, I should say that the need of such self-expression is even more imperative among our blind children. Dramatics—not as an extra-curricular activity, but as a definite part of the curriculum—should be the *rule,* and not the *exception,* in our schools for the blind. Pupils of all ages—those with obvious talent, as well as those less gifted—ought to be encouraged to take part in the school plays. Why? The answer to that question is the theme for our present discussion.

When blindness descends upon a little child, it not only deprives him of his sight, but imposes upon him certain irksome limitations, certain cruel restrictions which, if not fully recognized by his teachers in the beginning, may develop into added handicaps in themselves, and seriously impede his future progress. How may we best free the blind child from these restrictions, lessen his consciousness of his physical limitations? The answer is two-fold: by introducing him to the joys of the gymnasium and the amateur stage. While the importance of athletic activities should not be under-estimated, their value has long been recognized and stressed in every school for the blind. Each has its instructor of physical education.

Not so with dramatics. All too often the coaching of plays is left to chance. Usually some overworked teacher from another department, without training or experience in directing plays, is pressed into service. No wonder a performance given under such conditions is often dull and uninteresting! I once heard a teacher of mathematics say, "Oh, anybody can direct a play." That is undoubtedly the average person's attitude. Perhaps *anybody can* direct a play; but *anybody* cannot *successfully* direct a play.

It is essential that each school for the blind shall have a competent, well-trained director of plays, one who thoroughly understands the obstacles accompanying blindness. It will be her privilege, by means of the play, to lead her sightless pupils to a forgetfulness of their limitations.

A sense of physical freedom in the blind child should be sought at the outset. He must be taught that lack of sight is no excuse for hanging his head, for walking with

hesitant step or with outstretched hands, or for neglecting to face those with whom he is speaking. Now just *telling* the child day after day that he should not do these things, produces little effect. But just try giving that little girl the part of a fairy who must trip daintily about a stage, or a young princess who must speak haughtily to her subjects, and then see how quickly that curly head will be erect, that body become well-poised, and that awkwardness born of timidity be displaced for childish grace. Give that boy who ambles along with shuffling feet and drooping shoulders the part of Robinhood, and see how he straightens to his full height, regretting only that he is not taller.

The play is the surest, pleasantest method of teaching the blind child correct poise and grace of movement. While cavorting about the school stage, he may be taught those simple, natural gestures which seeing children learn without effort, by merely imitating their elders. Some blind children are naturally less restricted physically than others; but most of them must be carefully taught even the most elementary gestures; to smile pleasantly when friends greet them, to shake hands with people, to sit and stand gracefully. Lack of gestures, rigidity of the body and absence of facial expression have too long been thought the characteristics of our pupils. It is unfair to them to permit them to go on thus. Let them be up and doing! The play's the thing for them!

You will find some children more responsive than others. But is not the same thing true of seeing children? A part in one play will not alter the phlegmatic child overnight; he will not be suddenly transformed into the quick, alert youngster you wish him to be. But *regular participation* in plays will certainly bring out all the responsiveness in his nature. And if it does nothing else, it will free him from unpleasant mannerisms—of which, unfortunately, the blind child has more than his share—and teach him correct posture and normal physical reactions.

Furthermore, a trained director will teach him correct breathing, and proper use of the voice. Speech defects will be noted and eliminated. The younger the child, the easier it will be to correct these defects.

As the child must *do* his best in the play, so also must he *look* his best. Thus pride in his personal appearance may be encouraged. He will soon wish to look well-groomed at all times.

The mental stimulus offered by the study of great plays cannot be over-estimated. In playing the part of another person, the pupil's mind becomes keener; he has a chance to compare the ideas of others, to form judgments, to think for himself. His mental horizon widens; his ambitions are stirred. He may not be able to become the Julius Caesar or Mark Antony he plays, but he will grow in mental stature, aspire to something bigger—something he has perhaps thought beyond him.

Acting in plays is bound to kindle the child's imagination. The plight of the unimaginative blind child is indeed a sorry one. The teacher of dramatics must aid him to build up a reserve from which to draw, so as to keep him from being mentally dependent on seeing companions.

The same is true in regard to his emotions. The blind child is frequently a bundle of nerves and repressed emotions—thwarted desires for play and physical freedom he hesitates to express. Uually fear is the dominant emotion. But isn't that altogether natural? Haven't you sometimes been afraid in a strange, dark place? Then why wouldn't he be fearful in a world grown suddenly bewilderingly dark? Let's help him dispel this fear. The play's the thing—no doubt of it! Just try it. You will find that it awakens in your pupils that dormant need of emotional freedom, of self-expression which was stifled, but by no means killed by blindness. For the time being, the children become the interesting people they play. They almost forget their blindness; they throw off that shyness which was not natural to them anyway. From expressing the emotions of others, they are led, before you know it, to expressing their own

emotions. The joys and sorrows of dramatic characters give them an opportunity to give vent to their own joys and sorrows. Inhibitions are cast to the wind. Life is good, after all, even without sight! Emotional balance is theirs again.

From my own experience, I know this to be true. The various roles I played were emotional outlets for me. I am most unlike a goddess in appearance; yet, playing the part of Artemis, goddess of the moon, helped me to throw off my feeling of insignificance and to gain self-confidence. Romping about the "pretend" Forest of Arden—our school lawn—as Shakespeare's roguish Rosalind in *As You Like It,* gave me an exhilarating feeling of buoyant freedom I could not have gained in any other way, a buoyant freedom which has never left me. Playing tragic parts gave me a keener appreciation of the sufferings of others.

What the study of dramatics did for me, it has done, and will do for other young people without sight. I have seen many an awkward, seemingly uninteresting girl become positively radiant and interesting, when a school play had freed her from her inhibitions, given her a chance to display the best that was in her. And at such times I have smiled with satisfaction as I heard someone who had known the child for years, whisper in surprise, "I never would have believed Marian had it in her! Why, she has real possibilities!"

But the quiet, hard-working coach, standing back stage directing proceedings, realized her possibilities. She had the courage to let her have her moment in the spotlight.

I often think how different my life might have been, had I not been fortunate enough to have a thorough training in dramatic art. I found it the easiest means of convincing the public that I could do things. One of the happiest days of my life was when I was given a part in a cast of players who were all seeing.

You may stage the finest exhibition of school work to show the public what the blind can do; but if you wish to convince them completely, just invite them to your school play. It never fails. Seeing your pupils moving easily about the stage in their parts, puts the audience in a receptive mood. As the drama unfolds before their eyes, they will forget that the actors are blind, and see only normal girls and boys doing their best to entertain them. And it will not be difficult to convince this audience that these same girls and boys, when they have reached maturity, will be quite capable of doing their rightful share of the world's work.

An interest in dramatics may stimulate in the pupil an interest in other fields of endeavor. A study of dramatic masterpieces may lead to a wider acquaintance with all literature, and an interest in the greatest prose and poetry. Pupils will gain a wholesome respect for their own language, an appreciation of the best in literary style. The beauty of words and their correct pronunciation and usage may be most effectively taught in the dramatic class. Pupils quickly take pride in having an extensive vocabulary, clear enunciation and faultless diction. The younger the children, the more readily they will grasp this speech training. A director who neglects such a golden opportunity to improve his pupils' speech cannot expect to present a good play.

Participation in plays may lead the exceptional pupil to an interest in the writing of plays, which may open a new avenue for his creative gifts.

His part in a play may require that a young actor dance, and the result may be an added interest in dancing, and athletics, in general.

A teacher of handwork in one school for the blind has cleverly increased her pupils' pride in their sewing, by having them make all the costumes for their plays. Those girls haunt the sewing-room during their spare time, putting the final touches to their costumes. And think how pleasantly they are learning to sew!

One interest frequently leads to another.

Your pupils will not be likely to become actors; but the study of dramatics may lead them to their life work. At least, it will be a real aid in their physical, mental and emotional development.

Blind children, because of their handicap, should have a thorough, many-sided education. Why exclude a subject which will be of such benefit to them? Do not keep them from the "LAND OF *LET'S PRETEND!*" Remember, THE PLAY'S THE THING!

Editor's Note: On pages 33 to 38 is given a bibliography of plays chosen by Miss McGuire as suitable for production by blind children of different grade levels.

The Teacher of the Blind

We have been kindly invited by Mr. Robert B. Irwin to draw the attention of readers of *The Teachers Forum* to its English cousin—*The Teacher of the Blind.*

This magazine is the organ of the College of Teachers of the Blind, a voluntary association which is an accredited agent of the British Government working both with the Board of Education and with the Ministry of Health to promote the education, training, employment and social welfare of the blind.

The Teacher of the Blind is thus concerned with every branch of social service to those with little or no sight and covers a wide and interesting field.

It is published monthly (omitting August), both in print and in braille and the annual subscription is four shillings payable in advance to the honorary Editor:—

Miss Katharine Cramp,
40, Shaftesbury Road,
Coventry, England.

Mr. Irwin expresses the opinion that "Many professionally minded readers of *The Teachers Forum* would like to subscribe to *The Teacher of the Blind.*"

FOUNDATION LIBRARY

(The following is an excerpt taken from an address delivered by Mr. George Symes at the annual meeting of the College of Teachers of the Blind in England and published in the September issue of *The Teacher of the Blind.*)

Is our curriculum such that development of individual character is aided?

Do we make our pupils independent enough?

In many cases it is so much easier to do things ourselves than to use patience enough to win the desired response from the taught.

Trust develops character.

Does the curriculum—that is, the school time table covering instruction hours—help here at all? These may be only hours of cramming in of knowledge.

Am I right in suggesting that character develops when played upon by outside influences, in much the same way as a rose to come to full bloom needs the rain, the gentle breezes and the sunshine?

In our residential schools, where so many of our pupils miss the everyday influence of parents and a good home, it is no easy matter to make up the loss. Yet we know that under very difficult conditions, members of teaching and domestic staffs, and home teachers during holidays, are showing a devotion to the youngsters which goes far beyond mere instruction and supervision and is worthy of the highest praise. This help to character formation cannot be estimated. It is, however, possible perhaps to have too much supervision during what many pupils feel is their leisure time; and there is the danger of organizing leisure so that it becomes as laborious as work.

The right character will develop in congenial surroundings and interesting activities; and, while I don't wish to suggest yet another committee of enquiry, a pooling of thought upon the best use of out-of-school time may be appreciated by those who have to do so much duty during these hours. If high standards are to be the outcome of school experience these must grow in the

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WHY HAVE A SOCIAL WORKER IN A SCHOOL FOR THE BLIND?

Ruth E. Douglas

Perkins Institution as a residential school for the blind is not only concerned with strictly educational problems, but is vitally interested in each student medically, socially, psychologically and economically.

Medically the school wants to know if more can be done to restore vision or to keep the sight remaining. It wants to know what implications the eye diagnosis may have—what means are being taken so that other children will not be blind? If the cause is congenital and of a luetic nature, are the family under treatment if such is indicated?

It will be possible here to give only one case in the medical field in detail. Among the students who recently had the routine Hinton Test at Perkins is W—, a light-haired, fair-complexioned boy of sixteen. There was no history of a syphilitic condition, but his test showed a positive reaction. He was immediately put under treatment, but we believed our responsibility extended further. Were other members of his family infected, and if so were they under treatment were questions foremost in our minds. A home visit brought to our attention a father, mother, and three children. When the social worker made her visit, she found the following situation.

Because of poor health, both the father and mother are unable to work and G—, age twelve is doing the family ironing. He is a manly little fellow—at our entrance a trifle upset as he had just scorched one of his father's shirts. The family was once in much better circumstances, but the combination of poor health and the depression has left them almost penniless. They are a fine family, courageous in the face of their difficulties. The social worker tells them the results of W—'s Hinton test and of its implications, which they know only too well, Mr. A— having served in the army. They are overwhelmed. It can't be true that they have this disease! But as the social and medical history are taken a possibility of innocent infection comes to light. Both Mr. and Mrs. A—agree that the other children must be tested as soon as possible. The question is where. Their own doctor is to be away for some time, and they do not feel they can take any one else into their confidence, particularly as they are receiving welfare aid and feel that the matter might be made public.

The social worker suggests a Boston hospital and the same doctor who treated their son W— so that the case might be seen by him in its entirety. The plan is agreed upon and the social worker supplies transportation and help in getting the services of the doctor. The whole family receive Hinton tests with the result that G— and his brother together with one of their parents react positively. Medicine is prescribed.

Later G— believed himself to be going blind. He was taken again by the social worker to the Massachusetts General Hospital where he was examined in the Eye Clinic. It was found that he had several ingrowing eyelashes which might account for some irritation, but did not account for the lack of vision which he thought he had. He was referred to the Children's Clinic where a physician trained in psychiatry discussed his problem with him, telling him—that even though he had the same disease as his brother, he was not going blind. From that point on G— felt an improvement in his eyes.

Recently the family doctor returned and has taken over the case. We believe that following up this one case has saved these two children from blindness or other physical disabilities. In this case the purpose of the social worker was to

A. Have a medical examination to discover the source of infection and to get the infected under treatment.

B. To offer sympathetic understanding, helping the family to realize that neither they nor their son will be regarded in any different light because of the source of his blindness.
C. To get medical and psychiatric attention for the boy, G—, to forestall any possible hysterical eye condition.
D. To help the family to maintain their pride by providing such services as are required in order that no one outside the family might know the situation.
E. To aid in getting the responsibility for treatment back to the original community.

Where there is a case of hereditary blindness we want to know what measures are being taken so that there will be no more blind children from that particular family. Prevention of blindness in families where there is known to be a tendency toward poor eyes is a field in itself. The social worker through her contacts with the students, with their parents, and with the community is in a strategic position to help work toward prevention of blindness.

We find that many of our children have physical disabilities other than lack of sight and in making a thorough study of these cases, it is often essential to get early histories from the families themselves and also to consult hospital records to learn their findings and recommendations. The school doctor and nurse have not the time to collect this necessary background data. The very nature of this need puts it in the field of social work.

Our social interest begins with the child's relationship to his family and their attitude toward him. An effort is made to get health and family history on each student as he enters. This is sometimes done at the time the application is filed when the parents bring the applicant to be tested by the school psychologist.

The child's adjustment to the school is often patterned after his reaction to his home. Ideally a home visit should be made to each family at least once a year. To date that has been impossible for us and we have been obliged for the most part to limit our home interviews to more urgent cases. Requests for home visits come from teachers, matrons, physiotherapists, psychologist, and principal. Specific reasons for home visits have been such as the following:

1. To learn personal history and background so that one may better understand and help the child in the classroom, the house, and in his personal relationships. In this way there is an effort to discover what factors in his home may influence him in his endeavor to work out such problems as boasting, lying, uncooperativeness, temper, etc.
2. To learn from the family their approach to their child and to offer suggestions. These suggestions range from specific recommendations as to how to deal with Alice's temper tantrums to more tangible discussions upon the general attitude toward Alice and her disabilities.
3. To give encouragement and to emphasize the child's possibilities and to allay unnatural fears and worries.
4. To determine the reason for prolonged absence from school and to advise accordingly.
5. To obtain health information and to explain the medical standpoint of the school.
6. To discover leads for use in vocational placement.
7. To meet requests from the families.

In some cases home visits have been partially supplemented by conferences held at the school with the parents. Points in question have been such things as 1) new plans for the child because of his inability to adjust to the school for reasons of physical or mental instability 2) problems regarding physical health, and others. It seems that a certain number of our families feel their

children are in many ways strangers to them as vacations, letters, and firsthand information are infrequent. It is the task of the home visitor, or social worker, to make the parents feel that theirs is the responsibility for their child and that the school wants their co-operation and help in making plans for their individual children.

Because of its very nature, a residential school has many children who are not able to get home except for the long vacations and who have no friends or relatives near enough to visit them. In this way they do not have the friendly community contacts which a day student has. We find it possible frequently to arrange meetings at the school between the students and members of the community so that the students may have the benefit of larger social experiences, and the public learns in a more intimate way that blind people are not really different from seeing people. The less a child has of family companionship the more he wants someone who will be interested in him, not as one of a group, but as Billy Brown who comes from Caribou, Maine. There are many people visiting our institution daily who are interested in the students en masse, but we are hoping in some instances to individualize their interests to the benefit of both school and community.

Economically we want to know how each student is to fit into the industrial world. What is there in his community that he can do and do well? Is his would-be employer familiar with what the blind can do, and is he acquainted with this particular student? Although the following example is not representative, I would like to cite it as showing the possibilities of what cooperative effort can accomplish. L—, a totally blind girl, of twenty-three years, was about to graduate and go back to a manufacturing town. At a meeting of the heads of departments including the Director, Principal, Supervisor of Girls, Psychologist, Psychometrist, Representative of the State Department for the Blind, and Social Worker, her history was gone over in detail. It seemed that two possibilities were open to her—one to take a graduate year at the high school in her home town with the aim of perfecting her stenographic studies; while the other was to secure a position in the mill. L—, herself, with considerable force maintained that she was going to get a job whether it was possible or not. Through the channels of a home visit made by the Social Worker, a business associate of the employer offered to speak to him about getting L— work. This resulted in a letter from the employer asking for information concerning the girl. He had successfully employed graduates of Perkins in the past, and was willing to do so again if the student was a good economic risk. Our psychologist, Dr. Hincks, sent him a report concerning the girl's work, experience, capabilities and potentialities. Miss Birchard, the representative of the State Division of the Blind, took this girl for a personal interview. The final result has been that the girl has a position promised her. We believe that only through cooperation such as this and a joint effort toward coordinating our facilities will we be able to advise adequately either medically, socially, or economically.

The roll of a social worker in a school for the blind has possibilities of great scope. For, as has been shown, she is a link between the school, the home and the wider community. She offers a service valuable both in personal terms to the individual and in economic terms to the community.

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storms and sunshine of each succeeding day.

The best moral training comes from true discipline; with the adjustment of the child to his social environments, with the formation of sound habits, and his ready response to the claims made upon him by his team, his home, his school; his increasing pride in workmanship, which a sound education will give him; his training in tolerance and in cooperation; his learning to take failure with a brave heart and success with a steady mind . . .

DOCTOR ALLEN SAYS:

"Such joys—are sent
To give the soul fit nourishment."

There was a period in my early administration when I became critical of my residential teachers and they of me. I seemed to have too much to do and they too little; that is to say, some of the things they kept doing or omitting to do added to my troubles. A visiting fellow-principal, remarking my perplexity, said he had been told of a sure cure, which was to board out all the teachers, especially the women, and to turn the free-time care of the pupils over to hired supervisors who should live in. Now this did not appeal to me at all as acting *in loco parentis*. Presently a young new teacher from one such institution visited us and rather approved of having most of the staff resident, since, as she said, "It showed confidence in us." Not long afterwards a wise old optimist of a superintendent came who assured me that he greatly preferred to have his teachers live in, because their general influence was priceless, or could be made so in various ways, one of which was appointing each new one rather for her character, personality and speaking voice than mainly for her diplomas, credits, and degrees; another way, through encouraging each to cultivate a hobby; and still another, through fostering participation in things not directly connected with routine instruction—tennis, afternoon teas, parties, dances, parlor dramatics, etc.

Now in my first rebuilding I kept most of the teachers inside, but distributed their rooms as widely as feasible. All were urged to push their hobbies. Thereupon one who was a nature lover asked for a window-box in her classroom. She had it as soon as the carpenter could make, line and paint it. Soon most teachers had window greenery and flowers growing, much to the delight of their pupils; but, what is more to the point, the repetitious care of the growing things had become an outlet for these teachers' inner life, and they could but be the less lonely and the better for it. Other teachers, other diversions. Some music lovers took lessons from our specialist musicians.

When planning my second rebuilding I read, digested, and followed Dr. Howe's reasons for the segregate plan of institutional living, which applies to pupils and teachers alike, and, in carrying these out for all, I introduced every feature which promised to foster in most members of our large community the feeling of homelike belonging; for example, distributing the resident teachers in small suites and, since their private rooms were their sole retreat, advising them not to admit pupils there. No servant needed to enter. We provided the essential furniture but each made her room homelike with her own belongings, and she did her own room work. Most grew potted plants, (often putting them in the bathroom for protection at night) and when any one of these was in its glory, its owner would carry it over to chapel as her morning offering, beautiful and precious. Each winter when my amaryllis was in bloom I took that over through the warm tunnel. The custom of sharing our individual best at prayers grew until in a way we had to take turns.

Without knowing whose plant it was, I often referred to its presence, sometimes describing it. Of course pupils wanted to make their offerings too. One, now a teacher, tells of how eagerly she used to pick field daisies for chapel, affirming that doing so for such a purpose was one of the sweetest recollections of her school life.

SOME TRICKS WE PLAY UPON OURSELVES

SAMUEL P. HAYES, Ph.D.

(This chapel talk is an attempt to bring to the attention of young people some of the *escape mechanisms* now much talked of in the new psychology.)

What do you do when you are balked or thwarted? Success and happiness are easy enough when everything comes your way, but what happens when you meet opposition, or have bad luck, or suffer some handicap? It is the storm and stress of life that calls out our strength, or displays our weakness. What do you do when you are cornered, or pushed to the limit of your strength; when you are disappointed in your friends or abused by your enemies; when you are disillusioned and disheartened by the shattering of idols and the bankruptcy of ambition? Do you call on hidden resources of strength and fight the harder, or do you surrender and confess yourself beaten? Or do you play tricks upon yourself to gain a false sense of security, deluding yourself with imaginary solutions?

Of course none of us can escape thwartings. From the beginning of life there are many things which we cannot have or do or be. The little baby struggles against clothes that by their snugness hamper his free activity, and when he is old enough to run about, we put up gates and fences to keep him away from danger and to restrain his tendency to wander. Rules and regulations grow like weeds since every effort is made to direct the child's development along socially acceptable lines. For the child who does not take on the manners of the family in which he lives will become a source of constant annoyance in the home and a disgrace in the eyes of the world. Grown-ups too are surrounded by laws and customs. We boast of our free country, but we know that freedom is an illusion; it is quickly lost if we do not constantly curb our impulses. Some people are so conscious of social restrictions and individual thwartings that we hear them querulously exclaim, "What a terrible world this is!" Others seek to change it all by violent revolution.

Our thwartings come from many sources, varying with the habits, ideals and conventions of the group to which we belong. Table conduct that causes no criticism in camp or in a night lunch wagon may arouse disgust in the home. The language of the athletic field or the club may cause much lifting of eyebrows in the drawing room and ultimately lead to social ostracism. Certain things are "not done" by the "best people," though fashions change and may carry us along with them. Another set of inevitable thwartings arises from the fact that it is physically impossible to carry on contrary activities at the same time. We are invited to two parties for the same hour, but obviously we cannot go to both. We cannot grow thin and fat at the same time! Since practice devours time, we have not minutes enough in the twenty-four hours to develop all of our talents; we must select some and neglect the rest. Other thwarting obstacles appear in our environment or in our own character. A drought in the west ruins the farmers, young and old, good and bad. The death of a partner may wreck a firm where no fault could be found with the survivors. A cold in the head may make us unwelcome or unhappy in a gathering of friends; a crippled leg may keep us out of games; poor intelligence or extreme gullibility may make us "easy marks" for clever and merciless critics.

It is sometimes possible to solve our conflicts or escape from the traps into which we fall, by a flank attack. Encouraged by the old motto, "Where there's a will, there's a way," we arrange for some substitute satisfaction for the thwarted urges. I recently heard of a man who, losing his employment, developed a highly novel method of supporting himself and his family. Being fond of

dogs, he advertised his willingness to visit the homes of dog-owners and wash their dogs regularly one day each week. Another man in similar straits took advantage of the American appetite for orange juice at breakfast and started a business of squeezing oranges and delivering orange juice in bottles every morning, a task that has now been taken over in modified form by the milkman.

Mental mechanisms are devices people use when they have not the cleverness or the strength to meet thwartings openly and frankly. I have selected four which you have probably all used more freqently than you realize. The first three of these mechanisms are methods of *weakness* and the person with insight readily learns to avoid them. The fourth is a healthy trick which often saves the day when fate presses down too hard even for the strongest and best poised people.

Our first trick is technically called *projection,* i. e., throwing the blame outward. If we can put the responsibility upon something or someone else, we can then go scot-free, and escape all sense of failure. The idea is well expressed in the old proverb, "The poor carpenter accuses his tools." Coming into a room in the dark we stumble over a chair; assuming that the chair is to blame we kick it and perhaps also swear at it. Many a tennis player who has made a bad stroke throws down his racket in anger as though the racket were to blame. What young motorist has not jerked and shaken his Ford to get it started when the real trouble was that there was no gas in the tank? If we have a low score in bridge, it is because we have had terrible hands all the evening! If I fumble a football it was because "someone pushed me." If a tramp sets fire to a barn by a careless use of matches, pious folk, not knowing the real cause attribute the fire to "The Will of God." How frequently a boy who fails in an examination complains that the test was not fair. I knew a case of a college student who went to another university because repeated failures in the first college convinced her that one teacher had a grudge against her and would never let her get a passing grade. In all such situations we see the same mechanism working; by throwing the blame on someone else we escape the annoyance of admitting our own failure. What a rare person it is who will assume blame!

Another trick is called the *sour-grapes* mechanism. You are all familiar with the old fable about the fox and the grapes. Convinced that he could never reach the grapes, the fox consoled himself by saying he hadn't really missed anything because the grapes were so sour. As in many of Aesop's fables, the animal here spoke as many a human being might have done. "I never could admire athletic girls," said the girl who had never been a success in athletics herself. Having had an unhappy time in marriage we declare that the institution of marriage is a failure. "It is unpatriotic to travel in Europe" since we cannot afford it. "I do not approve of fraternities," said the boy who had never received an invitation to join. What must we think of people who say, "I'm glad I didn't get that job, for the boss is an awful grouch"; "I do not want to be a Ph.D., because I wouldn't wish to be a narrow specialist"; "I'm glad I'm not wealthy, for I wouldn't know how to spend the money wisely." A girl who was not invited to a dance consoled herself by the remark, "There will not be enough men there anyway." Many a homely girl has gained comfort from the saying, "Beautiful but dumb." Having no mail today, I claim I'm glad of it for "there might be bad news." There is something sour about all these illustrations, and the habit of constantly looking upon the world in this way seems to develop a grouchy, grumbling cynicism. This sour-grapes mechanism is a bad trick.

The third trick is somewhat similar, but has a better side. This we call the *Sweet-lemon* mechanism. One of the best illustrations I know is the tale of a desolate old lady stranded in an institution without

money and without friends. By her constant cheerfulness and happy outlook on life she prompted a visitor to ask her how she managed to enjoy herself in spite of all her misfortunes. "Why," she said, "I thank the Lord every day that the two teeth I have left are opposite each other!" It is probably wholesome for one who cannot finance a vacation trip to be able to say that she likes New York City in the summer. If one must rise at 6:00 every morning, it is well to be able to believe that early morning is the best part of the day. Perhaps the poverty-stricken poet who had many steps to climb to his attic chamber really believed that up there he had "the best view and the finest air." The workman who complained that the steak was tough might well accept his wife's admonition. "It's tougher when there is *no* steak." A very tall girl says she likes her height because she can easily see over other peoples' heads in the crowd, and another optimist who could not find the funds for a new dress made herself believe that she could not bear to give up the old one anyway. There is a grave danger however, that the sweet-lemon mechanism may degenerate into a sunny stupidity, a Pollyanna optimism which does nothing but glitter. For people who do not face the facts sometimes fail to realize how bad conditions may really be. Slums and sickness and injustice do not exist for those who close their eyes to them. No reforms would ever appear if we all took the sweet-lemon attitude. However, these optimists are much pleasanter to live with than the cynics whose lives are warped by the sour grapes mechanism.

What the psychologist calls *compensation* is generally a good trick. Thwarted in one line, we try another. We cannot sing, so we learn to play the piano. I was once told that in a large group of organists, there was not one who could sing a hymn acceptably. If we are not beautiful, we may still become charming. In some countries being a good conversationalist is considered a fine art, and is almost a profession. The short man may not be able to add one cubit to his stature, but he can stand straight and throw out his chest.

There are very few people who have not more than one ability and if they are disappointed in the development of one it is not so difficult to find another with which they can have better success. Even our fundamental urges may find outlets through compensation and help us to escape the feeling of being thwarted. We are not free to fight as primitive people did, but we can have a grand battle on the athletic field. Our superior may make us angry and we may not dare to answer back, but when we get home we can always attack the wood-pile! In bereavement, we can fill our time with work and our minds with the details of a useful job. History is full of examples of people who have successfully used this good trick of compensation. In fact some writers claim that a considerable part of the achievements of the great is merely overcompensation for thwarting or insufficiency. Lord Byron with a club foot, Edgar Allen Poe with a slight physique, Robert Louis Stevenson with tuberculosis, all sought to overcome their defects through the development of athletic skill, and then turned to writing for their major satisfaction. Napoleon and Lord Nelson compensated for inferior physique through their success in the science of war. Theodore Roosevelt, a weak and sickly child, persistently trained his body into a smooth working machine, organized the Rough Riders and became a big game hunter. Abraham Lincoln made people forget his homely face and ungainly stature through respect for the nobility of his mind and the beauty of his character. Demosthenes is said to have overcome stammering by filling his mouth with pebbles and shouting above the noise of breaking waves; ultimately he became the greatest orator of Greece. Phillips Brooks failed as a teacher because he could not enforce discipline and turned to the ministry for his life work. He was told that he would never make a

(*Continued on Page* 39)

BIBLIOGRAPHY OF PLAYS FOR YOUNG PEOPLE AND CHILDREN

(All Plays in This List Are Suitable for Use in Schools for the Blind.)

Compiled by BETTY MCGUIRE, M. A.

GRADES 1-4

Title	*Author*	*Where Obtained*
INDOOR AND OUTDOOR PLAYS FOR CHILDREN	John Farrar	(Drama Book Shop)
PINKIE AND THE FAIRIES	W. G. Robertson	
THE SNOW MAN	Elsa Beskow	
STAR FLOWER	Ann Hayden	
LITTLE PLAY BOOK	Katherine Lord	
LET'S PRETEND	Alice C. D. Riley	
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NINE NEW PLAYS FOR CHILDREN	Rose Fyleman	
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WINTER PLAYS AND PROGRAMS	Florence Hale	
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THE PLAY'S THE THING FOR CHILDREN	Alice C. D. Riley	
THE PINK FOX-TOY	Eugenia Black	
ELEVEN PLAYS FOR CHILDREN	Edith L. Squires	
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THE STEADFAST TIN SOLDIER	Dorothy Holloway	
CINDERELLA	Eugenia S. Black	
DING DONG BELL	Dorothy G. Hyde	
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THE FAIRY RING	Madge Anderson	
THE SANDMAN'S BROTHER	T. C. O'Donald	
THE SAD TALE OF THE TARTS	M. A. Jagendorf	
BEAN BOY	Towle Adair	
KATJEN'S GARDEN	Katherine Lord	
GOOSEHERD AND THE GOBLIN	Constance D'arcy Mackay	
LITTLE BLACK SAMBO	Hazel F. Kaufman	
MOTHER GOOSE DROPS IN	Joseph E. Shipley	
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JUNE MAGIC	Katherine Lord	
THE THREE BEARS	Katherine Lord	
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MOONBEAM	Edward Granville	
BILLY GRAYBEARD	Helen E. Megahan	
MAKE BELIEVE	A. A. Milne	
THE HOUSE IN BLIND ALLEY	Elmer Rice	
JACK AND THE BEAN STALK	Beatrice T. Lee	
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IN A GARDEN	Iva B. Kempshall	
THE BROWNIES' DREAM	Virginia Park Matthias	
LOST CHILDREN	Dorothy E. Nichols	(Longmans, Green & Co.)
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THE HAUNTED HOUSE	E. Englander and A. M. Brown	
LITTLE MEN	John Ravold	
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THE 'NITIATED	E. P. Conkle	
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LOST PRINCE—CHINESE	Dan Totheroh	
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FIVE ROBINHOOD PLAYS	Ronald Gow	
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MARBURY'S GHOST (FOR BOYS)	Marian Lindsay	
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UNHAPPY PRINCESS	Amy Levy	
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THE BIRTHDAY BALL	Marjorie Woods	
SING, YOU SINNER	Ray E. Hurd	
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HOW THE WEATHER IS MADE	Harold Brighouse	
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RIP VAN WINKLE (PANTOMIME)	Mme. Alberti	
THE EAST WIND'S REVENGE	Sam Janney	
FIVE GHOSTS	R. Wright	
THE DOWRY OF COLUMBINE	Bertha Goes	
MERRY TYLL	M. Jagendorf	
THE ENCHANTED GARDEN	Constance D. Mackay	
BILL BOARD	Rebecca Van Hamm Dale	
PATH OF ROSES	Ethel Van Der Verr	
POLLY PATCHWORK	Rachel Field	

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THANKS TO JOHNNY APPLESEED	Isabel M. McMeekin	
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MAY-TIME IN PLYMOUTH (DRAMA)	Olive M. Price	
THE ADMIRAL CHRISTOPHER (DRAMA)	Olive M. Price	
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GIANTS OF FORTUNE (COMMENCEMENT PLAY)	Beulah B. Woolard	
TREASURE ISLAND (ROMANTIC DRAMA)	Jules E. Goodman	
THE PRINCESS AND THE SWINEHERD (ROMANTIC COMEDY)	G. Seiler	
PRINCESS DAYSHINE	Beulah Marie Dix	
THE EMPEROR'S NEW CLOTHES	Charlet Chorpenning	
MASTER SKYLARK (ROMANTIC COMEDY)	Edgar White Burrill	
THE WIZARD OF OZ	Elizabeth F. Goodspead	
CHARMS (FAIRY PLAY)	G. M. George	
THE PATCHWORK GIRL OF OZ	Mary L. Marshall	
THE SCOTCH TWINS (COMEDY)	Eleanor Ellis Perkins	
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KINFOLK OF ROBINHOOD (FANTASY)	Percy Mackaye	
HEIDI (ROMANTIC PLAY)	Ethel Hale Freeman	
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THE SLEEPING BEAUTY	Margaret Ellen Clifford	
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A FAR COUNTRY (HISTORICAL DRAMA)	Olive Price	
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CHRISTMAS FOR ALL (PLAYS AND PIECES)	Julian Lee	(Drama Book Shop)
CHRISTMAS PLAYS	Sanford and Schauffler	
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THE LITTLEST SHEPHERD (CHRISTMAS)	F. Riderson and C. Clements	
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PEACE I GIVE UNTO YOU	Dorothy C. Wilson	
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ASK NANCY	Rose Campion	
GHOST OF A FRESHMAN	Rose Campion	
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I'M TERRIBLY SORRY	Perry Corneau	
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THE PRINCESS WHO COULD NOT BE MERRY	Marian Holbrook	
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PLAYS FROM LITERATURE—JUNIOR AND SENIOR BOOK	Evelyn Smitheach	
WINDOWS AND PROMISES	Ray Hurd	
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THE VANISHING PRINCESS	John Golden	(Samuel French)
THE ROBE OF WOOD	John Golden	
CAPT. KIDD JR. (FARCICAL COMEDY)	Rida J. Young	
THE CHINESE LANTERN	Lawrence Housman	
COUNTRY COUSIN (COMEDY)	Booth Tarkington (Dramatized by Julian Street)	
SEVENTEEN	Booth Tarkington	
CLARENCE	Booth Tarkington	
THE CHARM SCHOOL	Alice Duer Miller and Robert Milton	
DADDY LONG LEGS	Jean Webster	
COME OUT OF THE KITCHEN	A. E. Thomas	
COZY CORNERS	Pauline Phelps and Marian Short	
THE WREN	Booth Tarkington	
IF I WERE KING	A. J. H. McCarthy	
TOY MAKER OF NUREMBERG (CHILDREN OF SEVERAL AGES)	Austin Strong	
A MINUET (A LITTLE PLAY IN VERSE)	Louis N. Parker	
WURZEL FLUMMERY	A. A. Milne	
THE ROMANTIC AGE	A. A. Milne	
MR. PIM PASSES BY	A. A. Milne	
BELINDA (AN APRIL FOLLY)	A. A. Milne	
THE TRUTH ABOUT BLAYDES	A. A. Milne	
DULCY	George F. Kaufman and Marc Connelly	
CAPPY RICKS	Edward E. Rose	
ROBINHOOD	Owen Davis	
POLLY ANNA (THE GLAD PLAY)	Katherine Cushing	
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MISS MARMADUKE'S REIGN	Beulah King	
THE SINGING SOUL (CHINESE PLAY IN ONE ACT)	Mrs. Henry Bachus	
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THE THIRTEENTH DOMINO	H. S. Latham	
THE MONKEY'S PAW	Louis N. Parker	
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SOUTHUMBERLAND'S YULETIDE (MASQUE)	C. A. Coan	

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AT THE MOVIES (NOVELTY)	H. B. Allen and J. Upper	
THE TAMING OF HORACE (GIRL SCOUT COMEDY)	Gladys Young	
GRACIE (COMEDY)	Bessie Breene	
PIERROT OF THE MINUTE	Ernest Dowson	
A HELPING HAND	H. Booth	
THE SHOP OF PERPETUAL YOUTH	Katherine Morse and Leah Siegel	
ON THE ROAD TO PARNASSUS	Katherine Morse	
TATTERS	Richard Burton	
THE LIGHTS OF HAPPY LAND (PLAY IN ONE ACT FOR MARDI GRAS)	Marian Short	
SAUCE FOR THE GOSLINGS (A ONE SPEECH PLAY IN ONE ACT)	Elgine J. Warren	
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JEPHTHAH'S DAUGHTER (BIBLE PLAY)	Elma E. Levinger	
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THE BRIDE AND THE BURGLAR	Florence Speare	
THE TOUCHSTONE (FANTASY)	Colin C. Clements	
MARY GRACE STIRS THE APPLE BUTTER	Mary L. Treadwell	
LAVENDER AND RED PEPPER	Ruth Giorloff	
TOM SAWYER	Paul Kester	
MRS. WIGGS OF THE CABBAGE PATCH	Ann C. Flexner	
THE HOUSE OF SEVEN GABLES	Wall Spence	
THE OLD-FASHIONED GIRL	John D. Ravold	
ROSE IN BLOOM	John D. Ravold	
DAVID COPPERFIELD	John D. Ravold	
GLEE PLAYS THE GAME	Alice Gerstenberg	
THE MANDARIN COAT	Alice C. D. Riley	
BUT KATY DID! (COMEDY)	Kathryn Wayne	
THE GREEN GHOST	James Beach	
BAB	Edward Childs Carpenter	
SHAVINGS—JOSEPH LINCOLN'S NOVEL	(Dramatized by Pauline Phelps and Marian Short)	
MR. ANTONIO	Booth Tarkington	
CRADLE SONG	John G. Underhill	
REJUVENATION OF AUNT MARY	Ann Warner	
GREEN STOCKINGS	A. E. W. Mason	
A PRINCE THERE WAS	George Cohan	
BUNTY PULLS THE STRINGS	Graham Moffat	
ONCE THERE WAS A PRINCESS	Juliet Tompkins	
SMILING THROUGH	Allan Langdon Martin	
PEG O' MY HEART	J. H. Manners	
PATSY	Barrie Connors	
THE POOR SIMP	Zella H. Covington	(Longmans, Green & Co.)
POLLY OF THE CIRCUS (COMEDY DRAMA)	Margaret Mayo	
SQUARE CROOKS	James P. Judge	
PALS	Tacie May Hanna	
MISS LULU BETT	Zona Gale	
CARROTS MAY BE GOLDEN	Rita Benton	
FOOLIN' 'EM	Ray E. Hurd	
PETTICOATS	Marian Holbrook	
FIGURE-HEADS	Louise Saunders	
FINGERBOWLS AND ARAMINTA	Harry Hamilton	
THE PERSIAN POPPY	Gilbert Emery	
THE REHEARSAL	Christopher Morley	
THE IDOLS OF THE KING	Erle Remington	
DUST OF THE ROAD	Kenneth Sawyer Goodman	
HISTORICAL PLAYS OF COLONIAL DAYS	L. E. Tucker and E. L. Ryan	

Title	*Author*	*Where Obtained*
THE BEAU OF BATH (SIX CHARMING PLAYS, TEN MINUTES EACH, OF PERSONS WHO LIVED IN THE EIGHTEENTH CENTURY)	Constance D'arcy Mackay	(Henry Holt & Co.)
AS YOU LIKE IT (COMEDY)	Shakespeare	
TAMING OF THE SHREW (COMEDY)	Shakespeare	
TWELFTH NIGHT (COMEDY)	Shakespeare	
COMEDY OF ERRORS (COMEDY)	Shakespeare	
THE MERCHANT OF VENICE (COMEDY)	Shakespeare	
ROMEO AND JULIET (TRAGEDY)	Shakespeare	

THE SPOKEN LANGUAGE OF THE BLIND PRESCHOOL CHILD--A REVIEW

By R. S. French, Ph. D.

The Spoken Language of the Blind Preschool Child, by Kathryn Erroll Maxfield, Ph.D., *Archives of Psychology, No.* 201, New York, May, 1936. Pp. 100. It is with some trepidation that I venture a criticism of Miss Maxfield's contribution in the field of child psychology, first because child psychology is not my own specialty and second because I stand somewhat in awe of Miss Maxfield and consider her work in general above criticism. However, two other factors lead me on, one an old interest in linguistic problems in which I once specialized and two the evident modesty of the writer of this monograph, who subtitles it "A Study of Method."

Dr. Maxfield states justly and clearly the hindrances to such genetic study of language as she enters upon in her eighty-one pages of text and tables. The main difficulty is that of finding a sufficient number of children to give the investigation any high degree of statistical validity. This might be obviated somewhat if all preschool blind children in the United States could be known and studies, by competent investigators carried on in the home environment of the children. Such extension would add immensely to the value of the study, too, as it would counteract a certain degree of institutionalization which must have taken place in such groups as that in the Arthur Sunshine Home. Even a sampling on a larger scale would be very helpful. Because of restricted numbers Dr. Maxfield proposes to increase validity by a longitudinal extension of the study. This naturally makes her present efforts so tentative as to preclude more than inferences, though at least two of the inferences would seem to have both validity and value.

Dr. Maxfield finds a drawback, too, in the lack of adequate objective procedures. All significant studies in the field have been made with children of normal vision and while this may in itself set up a kind of "control" group, the fact of virtual pioneering places an unusual burden on the investigator. Very wisely she gives the major portion of her compilation to the search for pertinent questions and makes this study one of evaluation of those questions, with the elimination or tentative retention of a large proportion of them.

To one brought up on linguistics, with some severe and prolonged studies into both the structure of language and its human values and its general psychology, studies under two of America's master linguists, a difficulty presents itself that Dr. Maxfield has not mentioned, though I am sure she cannot have overlooked it. That difficulty concerns the non-validity of the conventional language categories, particularly the so-called parts of speech. The customary divisions and classifications are so utterly illogical and so completely non-psychological that their naive use in any investigation introduces a vitiating principle. Neither little children nor adults think in nouns, pronouns,

adjectives, adverbs, etc. Thus "she" may not only be a noun but a *proper* noun, not strictly proper it is true, but none the less a designation for a particular person. In one residential school at least the unqualified "she" means the secretary and business manager! Until a sane and scientific English grammar is written and a new series of categories established on the basis of linguistic science, any study involving grammatical classification is bound to go astray.

I like best the short paragraph beginning on p. 32 and ending at the top of p. 33, in which Dr. Maxfield makes the point of linguistic substitution on the part of the blind child, the keeping of "his spatial orientation and his sense of personal security through constant conversation with people around him, and through constant questionings." Dr. Maxfield's "Conclusion," too, is particularly good. The paragraphs on pages 84 and 85, beginning with "During the course of time a body of information should be available which can guide," etc., should be read and pondered over by every teacher of blind children. In fact I hope that this short "appreciation" will send them all to the monograph itself.

In closing I need hardly add that Dr. Maxfield shows every evidence of workmanlike procedure and the most meticulous care. This study but adds a notable step in a notable career. The field of work with and for the blind is being raised to a dignity of scientific endeavor and made richly interesting by the efforts of such careful workers as Dr. Samuel P. Hayes, Dr. Kathryn E. Maxfield and the other scientifically trained investigators who have entered that field and found it worth cultivating.

(*Continued from Page* 32)

success as a preacher since he was troubled with a speech defect. Watt was a sickly boy who became interested in the power of steam; he minimized the importance of his physical handicaps by harnessing one of the strongest forces of modern civilization. Schubert, thwarted by unrequited love, wrote some of our most beautiful love songs. Booker T. Washington, devoting himself to the education of the negro, did much to overcome race prejudice. Beethoven and Handel continued to write wonderful music in spite of deafness in one case and blindness in the other.

History then supports the observation of every-day life. We are bound to be thwarted and resisted; we may be seriously handicapped. Struggle is our human heritage from which none escapes; but the response we make is ours to choose. Let us then fight and compensate rather than surrender and suffer defeat. If we must play tricks upon ourselves, let us avoid those which deceive us with a false sense of security. Let us take the blame when it is ours, recognize our limitations and faults, and refuse to look sourly on the world's delicious grapes. Let us make the most of the gifts we have, face the facts of the world about us, and do our part in making things better for others.

THE TEACHERS FORUM
for
Instructors of Blind Children

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The Editor will not be responsible for opinions expressed in signed articles.

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TO A GREAT TEACHER

As we go to press, word reaches us that the world has just lost one of its really great teachers. After fifty years of service in one endeavor, Anne Sullivan Macy relinquished her life task on Tuesday, October 20th.

Anne Sullivan Macy possessed the indomitable spirit which is needed by any pioneer. Her courage, in the face of poverty, hardships, physical handicaps, and a task which

was considered impossible by the vast majority of people at the time she undertook it, has written a chapter in educational history that will always live. The originality and imagination which she brought to her work resulted in the development of many new methods of teaching the deaf-blind.

To readers of *The Teachers Forum,* it is unnecessary to retrace the events of her life, for they have become so identified with work for the blind and the deaf-blind, and her influence has been so far-reaching that it is almost inconceivable that they should be unfamiliar to anyone engaged in teaching the handicapped.

The great service which Mrs. Macy has performed, in revealing Helen Keller, as we know her, to the world, is the symbol for an even more outstanding contribution. Through Mrs. Macy and Helen Keller, new hope has been given to all those who must go through life without hearing and without sight. Their pioneering has shown that an alert intelligence can surmount the physical handicaps of deafness and blindness, and by practical example they have indicated the way in which it can be accomplished. To those who are engaged in teaching handicapped children, this contribution is of paramount importance. Until the joint success of Helen Keller and Mrs. Macy, educators as a whole, because of their lukewarm attitude toward the probable chance of success, and in view of economic considerations, were disinclined to believe that an attempt to educate the deaf-blind child was justified. In a few isolated cases, educators felt that special efforts should be made for the education of this doubly-handicapped group, but public lethargy toward the problem limited their activities. An example creating nation-wide interest was needed, and the careers of Helen Keller and Mrs. Macy blazed a trail that opened up a new field of human reclamation. Mrs. Macy's unusual ability to interpret to the public, in a clear, interesting manner, the work that she was doing, enabled her to present it in such a fashion that the problems of the deaf-blind were given national attention. Today, through them, the education of the deaf-blind is gradually being recognized as a definite responsibility of society, and facilities for the training of this doubly-handicapped group are being enlarged.

Merely to measure the contribution of Mrs. Macy, and Helen Keller—for it is impossible to write of the value of the one without the other—on the basis of their individual success and their assistance in releasing from bondage "those in the dark silence," would mean the omission of that which is probably their most lasting service. No one can measure their influence in advancing the cause of the handicapped. We only know that it is great. Through their work, public opinion in regard to blind and deaf-blind people has been set in a more favorable cast, legislators have attained a better understanding of the needs of the handicapped, teachers of blind children and adults have met with a more sympathetic attitude toward their work, and organizations working in behalf of blind people have found their problems of financial support less difficult.

A great teacher has left our ranks, but the world is now a more livable place for all mankind because of her accomplishments, and the lives of thousands of handicapped people for generations will continue to benefit because of her great personality.

Our Contributors

Miss Betty McGuire of St. Louis, Mo. has long been actively interested in dramatics in schools for the blind.

Miss Ruth E. Douglas is social worker for Perkins Institute and Massachusetts School for the Blind at Watertown.

Dr. Samuel P. Hayes contributes another of his interesting chapel talks for blind children in this issue.

Dr. R. S. French is Superintendent of the California School for the Blind.

The Teachers Forum

FOR

INSTRUCTORS OF BLIND CHILDREN

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THE IMPORTANCE OF MEMORY IN THE EDUCATION OF THE BLIND

Translated by SAMUEL P. HAYES, Ph. D

From Friedrich Zech's *Erziehung und Unterricht der Blinden*, Danzig: A. W. Kafemann 1913, pages 155-160. Reprinted with the permission of the publishers, A. W. Kafemann, G. M. b. 11, Danzig.

Translator's note: In my search through the literature upon memory, I was particularly pleased with this chapter of Zech's. It is based upon a thorough appreciation of the modern psychology of memory and makes very plain to the teacher of the blind just how to apply this knowledge in the classroom.

The demands placed upon the memory of the blind by school and life are essentially higher than is the case with the seeing. For the seeing the retention and reproduction of ideas, be they factual or verbal, are facilitated by two circumstances: the majority of the things and phenomena which he learns to know, come repeatedly to his attention, many of them infinitely often, so that their essential qualities and their relations to each other become impressed upon his mind without the least effort. Moreover he finds an exceedingly effective memory aid in the various kinds of graphic presentation—in writing, pictures, drawings, charts and graphs. At what a disadvantage in these matters are the blind! A blind pupil has in his classes learned to know a plow, a little model with which he draws an insignificant furrow in the sand. But after this he may never again come in contact with a plow. In his natural history classes a fox may be studied; with the close of the class he bids it farewell, never to meet it again. A geographic name slips his memory, but his relief map is dumb; he would like to play a piece of music which he has forgotten but the notes, which his seeing friend may translate into tones with a fleeting glance, do not exist for him. Whatever he wishes to call his own, he must retain in his memory, and must hold it in such a way that it shall be ready on demand at any later time. To be sure, the blind pupil is not completely lacking in memory aids; he has books to reread or consult; he can make notes in his tactual script; for the production of sketches and simple geometric drawings he has the appropriate apparatus. But how insignificant is all this in comparison to the wealth of aids upon which the seeing may draw!

The very great significance of memory to the blind makes it necessary that special attention should be given to the understanding and impressing of the materials of instruction. It is of primary importance that we should not demand too much of the memory, that we should not compel the retention of unimportant material, or of facts which have little meaning for the education of the blind. What may be forgotten without harm, should not in the first place be learned and handled. If we hold fast to this principle, much that now finds place in the curricula of schools for the blind would have to be stricken out: from the relief maps used in geography many points, many lines indicating rivers, many mountain elevations would disappear; in the study of language many dead rules, many definitions, many exercises would be dropped, as not worthy of permanent retention. This would give sufficient time for thorough handling of the really worthwhile and essential things. And with this we must insist that what is learned shall be so firmly impressed upon the memory that the memory images shall not easily fade or be lost. To this end it is of the greatest importance that education should be as concrete as possible. What affects several senses tends to make a permanent impression; mere word sounds which affect the ear only, may soon vanish from memory. Moreover, an impression, to be lasting, should be based on understanding. We should not ask students simply to play over a piece of music till they have mastered it mechanically and can repeat it at will, but through discussion with the pupils, we should draw out the structure of the piece, then teach them the leading melodies and determine

the fingering. With geographic items we should, as far as possible, teach their sensory background; in language instruction also the same method should be used. The discovery of concrete values is all the more necessary with the blind since they tend to use words mechanically; their words do not come from their own world but are borrowed from the world of the seeing. As a general pedagogical principle we should avoid all mere grandiloquence, all pure phrase-making. In schools for the seeing we may perhaps approve much that is vague or emotionally impressionistic in verbal and written presentation; in schools for the blind we must constantly insist that only that which can be really known, that which can be concretely experienced, shall be talked about.

It is customary to speak of primary and secondary memory. Under the first we include the immediate retention of material after a single presentation; under the second the permanent retention of material impressed upon the memory by repeated presentation and reproduction. Primary memory occurs when a question is asked, in dictation, in mental arithmetic (retention of the problem). While it may be in general desirable that such material should be presented only once, that a sentence dictated, or a problem spoken, should not be repeated two or three times by the teacher, we must expect that errors will easily arise, since the material comes to the blind pupil as a purely acoustic impression. The seeing have also the movements of the teacher's lips and his facial expression to aid them. In many cases it will be necessary to give to certain pupils an immediate repetition of the sentence to be written or the problem to be solved. As a rule, however, such repetitions should not occur.

When it is a question of making a permanent impression of the material, frequent reproductions are needed. This is the case with names, rules and key sentences, which must be impressed through the ear alone. Such material should be taught through repeated recitation by individual pupils, and through choral response. In order that this repetition may not become too mechanical it is well to arrange to have the names and sentences occur in varied connections. Suppose, for instance, that the pupils have discovered on the map that the Warthe is a tributary forming a right angle to the Oder river. The name is not yet familiar to them. After the teacher has given the name, he should continue with the following exercises, aiming to impress the name by associating it with a series of actual experiences: Repeat the name. You also. Speak it in chorus. The name is to be spelled with a "th." Write it now (all the pupils). Say that the Warthe is a tributary of the Oder. Tell them on which side the river empties into the Oder, using the word "tributary." Show the relation of the Warthe to the province of Posen and use the phrase, "principal river." Tell them through which provinces the Warthe flows.

In the learning of poetry, which with beginners is taught verbally, we must remember that according to recent experiments it is uneconomical to memorize in small units. We work with the least expense of effort if we seek the impression of memory material of moderate range as a whole; poetry then should be learned not line by line, nor even two or three lines at a time, but by stanzas. In the middle and higher class levels, only those poems in the readers should be learned which the pupils can manage without the help of the teacher. In all such memorizing, of course, a study of the meaning of the poem should first be completed.

Every act of memory demands a strenuous concentration of mental effort; any distraction of the attention interferes with the learning. Now the blind are especially susceptible to distraction by auditory stimuli; even slight noises that the seeing would hardly notice, draw their attention away. Hence we should assure a quiet condition in the classroom; music from across the way should not be allowed to disturb a class.

The few external helps for the memory, which are possible to the blind, should by no means be withheld. Thus the teacher of geology should put into tactile script any new names that occur, and hang up the sheet as a help to economical repetition and impression. Important rules and key sentences should be written out by all the pupils, preferably in a special memorandum book which should always remain in the possession of the pupils during the school session. For the impression of biblical sayings, church hymns, Bible stories and biblical material the pupils should have supplementary books at hand, which, however, should be used with understanding. Whether special books are needed for the teaching of grammar and spelling, opinions differ. As a matter of fact, we certainly can get along without such books; and in their use there lurks the danger that the living, spoken word, which has for the blind a much higher significance than it has for the seeing, may suffer through the use of a hodge-podge of rules and exercises in writing. Moreover it is not advisable at the beginning to load the memory with grammatical rules and practice material. Auxiliary books are entirely unnecessary for instruction in the exact sciences. In music the exclusive dependence upon hearing gives place with advanced pupils to the reading of musical notes. For the adult blind the occasional fixing of thoughts by writing is often important and necessary; by means of a small pocket tablet for tactual script, notations of any sort may be made. The blind business man could never succeed without notes of his debits and credits.

Artificial helps for the impression of names and the location of geographic data are of value in the education of the blind only when they are purely acoustic and free from moremonic artificialities. (For example, the watercourses and islands of the Settiner Bay: *Peene-Westen; Swine-Mitte; Divenow-Osten; Usedom-Westen; Wollin-Osten*). For learning braille letters or contractions one may be helped by the inversion or changed position of the dots, as "au" is the same as "au" inverted, "ein" is the same as "n" inverted and "ver" is the same as "c" printed lower. The keys of a typewriter are easily learned by the blind man if he associates the letters with a series of words, inserting the vowels needed, or if he makes words with the letters of the keys and unites them in a meaningful sentence. (The upper row of keys of the Blickensderfer typewriter consists of the letters P F L O H; sentence, *Peter findet leicht offene Herzen.*)

The permanent retention of ideas and knowledge is best assured through frequent repetition. Many kinds of repetition may be used. Of special value is the renewed sensory experience of objects observed before; no verbal repetition serves so well. Impressions take form particularly well if with the raising of a question one goes on to the presentation of the object. If the most important kinds of fish are being discussed in natural history, one might on repetition associate one form with a prepared specimen. Pupils might draw the body contour common to all fish or indicate on a model of a fish's body the position of the fins in various kinds of fish. It is a most difficult task to retain in memory the forms of objects without renewed touching of these objects. Repeated presentation is especially important in teaching geography. If the image of a map is not constantly renewed in the pupil's mind, it very soon fades away and with it he loses his geographic knowledge. The repetition for reviving geographic facts is best attained through re-experiencing the maps. This should begin with repeated search for the rivers, mountains and towns named, then through following the lines marking the boundaries of lands, rivers and mountains, and through schematic presentation. It is especially important to avoid in all repetition the tendency to deadening uniformity.

THE CHOIR ORGANIZATION IN THE IOWA SCHOOL FOR THE BLIND

ANNA MAY SANSOM

The choir in the Iowa School for the Blind was established in the early days of the school, when a short Chapel Service was made a part of the daily school schedule. When I came to the school, as an instructor in singing, just one phase of my work was emphasized; I was made acquainted with the choir traditions; also, with the high musical attainment of the group, and the goal toward which the choir was working. Through the years, our traditions have been cherished, as a precious heritage; the high standard of musical attainment has ever been a challenge; while the goal set for the choir, in the early days of my sojourn in I. S. B., has long been a constant incentive for further improvement. Within recent years, a Choir Organization has been evolved, concerning which I am writing.

The average individual does not enjoy arbitrary rule. It was an occasional protest against arbitrary assignment to choir duty, that first suggested the thought of "volunteer membership," and eventually led to the present Choir Organization.

The constitution of the choir, drafted by a committee of choir members in conjunction with the Choir Director, defines the object of the organization as an effort to establish a suitable background—intellectual, moral and social—for a more comprehensive study of sacred music, and a "united effort to measure up, so far as in us lies, to the technic and appreciation required to interpret the beauty of sacred song."

Students who have attained the eighth grade and received the recommendation of the Choir Director are eligible to choir membership. As soon as the director recommends candidates for membership, the choir launches its "Membership Quest"; waiting upon the candidates, and inviting them to become choir members. The "Quest" ended, the choir votes formally upon the names of those candidates, who have indicated a desire to serve in the choir. Election to membership requires a unanimous vote of the organization. Should any candidate receive a negative vote, (which must be accompanied by a written explanation), the candidate is denied choir membership. At the close of the election, the Corresponding Secretary sends notices of election to all successful candidates, announcing also the date of their formal reception into the choir. The constitution provides that this ceremonial of reception shall follow the Baccalaureate Service each year.

The choir pledge is worthy of mention; it reads, "Do you hereby solemnly promise faithfully to discharge your duties as a member of this choir, to be cheerfully governed by its constitution and by-laws, to keep its business secret, to use all honorable means for the promotion of its interests, and to conduct yourself in the school and elsewhere in such a way as not to reflect discredit upon yourself or the choir?" The answer is, "I do." Any boy or girl voluntarily taking this pledge accepts a duty which will demand hope, sacrifice, courage and loyalty. Choir colors have been chosen that are symbolic of certain qualities of character: silver, red, green, blue and gold. Silver is symbolic of hope; red is the color of sacrifice; green symbolizes pluck, courage; blue means loyalty, and gold is symbolic of influence, which as a quality of character is a composite of all the other qualities. Choir members who give five years of devoted service to the school may, upon graduation, be admitted to "The Circle of the Silver Cross." This recognition is made by the presentation of small sterling silver crosses. The little cross is a small emblem to remind the recipient

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DOCTOR ALLEN SAYS: HOW I MADE LATIN INTERESTING

A college professor had shown us, his students, his rational method of translating Greek, saying, "You already have a working vocabulary. Therefore, lock up your dictionaries and dig the meaning of new words from context, proceeding thus: Read aloud your paragraph twice, without trying to translate. The first time will yield you the general subject; the second, a great deal more. Next read it through again, this time roughly translating. If any word remains too much for you, underscore it and I'll tell you at the next class why you should have known its meaning. Of course the old dictionary way seems quicker but, like the crutch it becomes, the sooner you can dispense with it the better. You can if you think you can. So try it out, even if you start off with a limp; for presently you will be running along faster than you believed possible. You will have used ears as well as eyes, but particularly your wits. To my mind the dictionary way gives fewest returns."

The professor's method worked and, moreover, we liked it. The compiler of *The Copeland Translations,* Scribners, 1934, who took the course, writes in the Introductory Notes, Page IX that he came to read "twelve or so pages of Herodotus in an hour, enjoyably."

My own first teaching of beginning Latin to blind pupils took advantage of the fact that they had no dictionary. I read aloud with proper emphasis a much simplified Latin version of the familiar Story of Creation, pronouncing the words as though they were English: *"Deus creavit caelum et terram intra sex dies. Primo die fecit lucem. Secundo die fecit firmamentum, quod vocavit caelum. Tertio die coëgitaquas in unum locum, et eduxit e terra plantas et arbores. Quarto die fecit solemn, et lunam, et stellas. Quinto die fecit aves quae volitant in aëre, et pisces qui natant in aquis. Sexto die fecit omnia animantia, postremo, hominem; et quievit die septimo."*

Now these boys followed pretty well, just as any one familiar with the story would have done. At the close of a very satisfactory year I felt that with this method of forcing students to use their minds their blindness had been more help than hindrance to them. Whenever, therefore, in later years a high school class was about to begin Latin I would select for a chapel reading this story of creation in its English version; then in my after-chapel talk repeat it in the Latin as above. As I proceeded smiles appeared on most faces, showing that the story was recognized. Thereupon I asked, "Who said Latin is hard? Miss Langworthy, who tomorrow will begin it with some of you, tells me her pupils invariably like Latin, for about half elect it a second year when it is no longer required."

I once sent a booklet of Bible stories (Narrationes Biblicae)[1] to the mother of an English boy, aged eight. He knew the stories, so could be made to treat their repetition in the new tongue as a game; and presently finding himself the only beginner in his school class not dreading Latin, started in as top scholar in it; indeed, seven years later, is still such in his group at Winchester college, which boys must enter through competitive examination before they are fourteen.

A certain professor who teaches students how to teach mathematics assures them that the reason so many children hate the subject is that they are afraid of it; and that the secret is to introduce it as a number game, and never to advance too fast for their comprehension. He claims that this is a psychological matter, and that the surest road to success in mathematics as in Latin, is to make the pupils like it.

[1] From the *Vulgate*, by Lipsky & Wedeck, pub. by Silver, Burdett & Co., 1928.

BLINDNESS: A PSYCHOLOGICAL PROBLEM

MARJORIE FISKE

Stereotyped opinion rates blindness rather summarily as the most pitiful of the physical handicaps. The average blind person thinks quite otherwise. Confronted with his choice of handicaps, he invariably prefers blindness to almost any other. He misses his sight only as we miss wings. He knows that sight is a convenience, because we tell him so, but there can never be much real hollowness or vacancy from the lack of something one has never known. Not the physical fact of being without sight, but the psychological fact of being treated as a person without sight is the source of conflict for the blind man. The first difficulty he can overcome for himself—by compensation and substitution. The second difficulty can be overcome only by changing one of society's cherished ideas. He knows the difficulty of attempting that.

Nearly all of the emotional, intellectual, and social maladjustments with which I have come into contact in studying the psychology of blindness can be traced directly or indirectly to the attitude of the parents toward the child. Nor is this purely a personal conclusion: one gets repercussions from waves of resentment toward this attitude from Valentine Haüy, who voiced his in a stage whisper, to modern educators, who unite in a chorus. Such a generalization, of course, applies only to those who have been blind from birth or from early childhood, although doubtless the same blanket could smother those afflicted much later in life, with even more suffocating results.

I. "*—And the Sins of the Parents—*" is a phrase commonly used to express the importance of heredity. It is equally applicable to the results of their treatment of their children. Perhaps the best means of illustrating the diverse effects of early family training is by actual examples. Here is a student of considerable alertness. His intellectual attainments are more than satisfactory, his musical technique is marked, and his appreciation and understanding of musical theory is superior. He has, however, been sheltered to the extreme by a wealthy and protective family, to such an extent that he has no confidence either in his ability to pilot himself about or in his ability to cope with social situations. The ability to travel alone, in a person with many other satisfactions and achievements, is a relatively unimportant faculty, but in this instance it has come to stand for general incompetence. All of his maladjustment to the seeing world is symbolized by the one fact that at every step he is completely dependent. He has allowed this incapacity to work on him until he has felt it necessary to shut himself off almost completely from social contacts of any sort, with the exception of his immediate family and one friend—and even the friend he suspects of an altruistic turn of mind. Since our subject suffers keenly in social situations he quite naturally turns to something he can do well—and devotes his time to music or to scholastic endeavours. That he will realize as he matures the narrowness and limitations of his life, and the stifling effect his own feelings of inferiority have had upon it, is apparent, for he has sufficient insight into his own personality to analyze his actions and reactions. If this self analysis should appear at an early age, there is a possibility of his overcoming this self-imposed limitation and so of gaining the self-confidence necessary to well-being. There is considerable danger, however, that urged by the solicitousness of his family, he will allow them to continue to manage the mechanics of life while he pursues nebulous intangibles. When the support of the family fails, as such support is bound to, he will find the real world a shadow and himself living in fantasy and illusion.

In contrast to this case consider another boy, of good mentality and of average

social and economic background. This boy's parents, however, endeavoured to develop in him a spirit of self reliance—to such an extent, indeed, that they were accused of being indifferent to him. As a very small child he was encouraged to dress himself, to feed himself, to care for his personal belongings. As a result he did not even question the feasibility of his travelling by himself. Since early adolescence he has walked, roller-skated, and used the subway—socially he has learned to meet people half way (sometimes only too literally) and in spite of occasional bumps and stumblings has developed an interest in people which will prove invaluable to him in later life. Whether or not he will be as successful commercially as our first case he most certainly will live a fuller, richer, and more normal life.

Our first problem, then, is not with the blind child himself, but with his parents. The situation is easy to understand, but hard to modify. Picture an average home, two physically normal children, and then the birth of a blind child, or a child who through accident or illness, soon becomes blinded. Almost any mother would feel an increase of the maternal instinct—a source of much future maladjustment for the average child—and she would feel compelled to care for the child in his every want, and withal she might even be glad that he was in some measure permanently dependent upon her. Here is one of her children who will never grow away from her. He will always need her, and this need is the direct complement to the already over-stimulated maternal instinct. But of course the mother alone is not to blame. If the child is a girl, the father is often the one most adamant about refusing to let her leave the house unless accompanied by someone in whom he has the utmost confidence. The blind girl, perhaps naturally unaggressive, withdraws more and more into herself. If there are any special talents manifest, as in the case of our first boy, they are encouraged, too often to the neglect of all other activities.

In some instances the lot of the blind girl is not as unfortunate as it seems. Here is the case of a young girl from a comfortable home and well educated parents. She has been given every opportunity to observe, examine, and experience—in the company of someone else. Not for protection, of course, but rather to keep her from becoming lonesome. Consequently although her school life has been very successful (she has had excellent grades, and has made many friends) her knowledge of even the commonest details of everyday life is so limited, her experience so vicarious, that her dreams of becoming a journalist are pathetic. She might, however, make an excellent teacher, probably in an institution (for the education of the blind) and both she and her parents may then easily rationalize themselves into the belief that she would not have had the necessary qualifications for a writer even if she had had her sight.

There are several obvious reasons for this protective attitude of parents. In the first place crass indifference to the best interests of the child, on their part and on the part of educators, accounts for much of it. Those who have dealt with blind children, particularly the very young ones, realize that it is a far simpler task to tie Johnny's shoes for him than to teach him to tie them himself. Secondly there is the fear on the part of the parents that Johnny may be in actual physical danger if not carefully watched every moment, a fear which ought easily to be overcome by simple example—for there are surely enough young blind people who travel by themselves to prove the expediency of it; and thirdly the feeling that an insistence upon self-sufficiency may be interpreted as cruelty by observers and friends. This last factor is in my opinion of considerable importance, although frequently it is entirely overlooked. There is a certain kind of social approbation that goes with the dedication of one's life to a Cause—and caring for a blind person is no exception, however great the harm to the individual concerned.

Granted the importance of the handicap itself, it still fades into insignificance when compared with the personality difficulties arising from maladjustment.

The work of the psychologist in a school for the blind is thus predetermined years before the actual problems present themselves. There would be scarcely any need of psychiatric work among blind students at all (that is, those born blind), were the clinician to treat, instead of the child, the parents of the child, at the very onset of the handicap. We are more and more recognizing the importance of not only the first few years, but the first few weeks and months of the child's life. The problem of emotional maladjustments then, can best be met by a wider field of adult education.

There are other factors in the family situation which are of considerable importance, however, and need to be recognized, although recognition of itself only serves to clarify the analysis of the problem. Practically, it should serve to encourage changes in procedure. My observation has convinced me that the youngest in a family of more than three children, if that youngest is blind, develops a greater feeling of dependence on others than the average blind child. Conversely, the oldest in a family of several children has a somewhat less developed feeling of dependence. This latter tendency is so slight as to be almost negligible, however, for obviously if he is the oldest he was at one time the only child, and early dependencies were established which even the advent of younger children could not alleviate.

In the case of the blind boy, strangely enough, the poorer the family the better adjusted is the boy—assuming average health and intelligence. The higher the income of the family the more sheltered the boy is, since his parents have not only more time to devote to him, but often have fewer children, thus lessening the need for him to shift for himself in a competitive group. The blind girl from the bare subsistence level, however, is not left to shift for herself. She suffers rather than benefits from her low economic status. In the first place there are often so many other children that the mother has little time to care for her, but instead of encouraging the child to do things for herself, the mother has the brothers and sisters watch over her and wait upon her. The lack of income limits not only the time the parents can devote to her, but the activity she herself may enjoy. It is not a rare thing for a blind girl, unless sent to a special school, to be put into a chair at the beginning of the day and forced to sit there, her meals being brought (and probably fed) to her. Ultimately this enforced inactivity deadens her so that she has no longer any desire to be active. Such languor, in milder forms, is noticed in schools for the blind, where it is by no means infrequent for girls to admit that they have not even the desire to do things for themselves. This spirit of indifference defeats the psychologist before he begins his work: to effect a satisfactory adjustment there must be at least the wish to improve. The girl of more well-to-do parents, of course, has many additional opportunities, such as being taken outside of the home more frequently, encountering more social situations, and being given educational opportunities conducive to a fuller intellectual development.

II. *Personality Problems in the School for the Blind.*

Almost as long and as fruitless as the heredity-environment controversy has been the debate concerning the relative advantages of placing a blind child in a regular public school as compared to a school especially endowed for his group. Like most endless arguments, there is much truth on both sides, and only objective experimentation can settle the issue. Possibly the ideal solution is to be found in a combination of both methods: that is, education and special training in the use of the tools and technique of the blind, followed by elementary and possibly secondary education in schools for the blind; then equipped with the special skills and the

rudiments of education, the blind youth might enter a higher institution, either for special training or general liberal arts courses, where he could mingle with the sort of people with whom he must spend the rest of his life, unless he ultimately escapes to the shelter of an institution.

For the very young blind child to be thrust into a public school as his first venture in the world is sheer cruelty, unless, of course, special provisions are made for his training. Ordinarily, however, the kindergarten teacher is sufficiently taxed by a group of normal youngsters. To have a blind child among them, who, though he may not demand special attention, certainly needs it, is unfair not only to the teacher but to the child himself, and if she does give him special assistance, is unfair to the rest of the children. In a school for the blind the teachers are equipped to give the child training in those techniques of braille and of object study which are so necessary to him. The child is made to feel not different and isolated as he would be in a class of seeing children, but as one with the group, a group similarly equipped and with common interests. This feeling of oneness with a group is most valuable to the young child—as valuable as the feeling of ostracism is disastrous. The importance of homogeneous grouping is only just beginning to be realized. By homogeneous grouping is meant grouping based not only upon physiological age, a norm of intelligence and of economic and social status, but also on norms of health, energy, and the possession of physical capabilities. The effect upon a blind child of being the only one thus handicapped in his class can never be measured, but it must be tremendous, especially on the very young. With maturity some adjustment may be expected in this respect, with or without special training.

The counter argument is almost as convincing: the blind child, nurtured in an institution and suddenly thrust into the world at the end of an eight or ten year training period, is at a loss concerning what to expect of it, or what is expected of him. Granted that he has made a good adjustment in school: he has made an adjustment, then, to a group of blind students, to a group of teachers and administrators whose particular interest is in his handicap, and to a group of studies and activities adapted to him and to his special needs. He meets none of these when he leaves the school. I know a boy who was very well adapted to life in the school. He made many friends, his scholastic achievements were above average, and his interest in music provided what should have proven a lasting satisfaction. At the end of his training period he hunted for work. He could do nothing as well as a seeing man could do it. Or if as well, not as rapidly. But he refused to be hired as a bit of soul-saving philanthropy on the part of an employer. He was battered about considerably for two years, and even then found no permanent employment. His family, on the bare subsistence level, could control themselves no longer: had they not sacrificed themselves to keep him in school longer than the rest of the children? Had he not taken special courses in manual training? Quarrel after quarrel ensued. There was no special consideration for his handicap here, rather the dawning of a bitter thought: he was a liability. He was forced, in order to maintain his self respect, to leave home. Eventually, through the aid of a special employment agency, he found work at a pittance. But being a mechanical automaton wore down his rather splendid resistance to the world. There was no rebellion left. In his last letter to a friend he terminates the relationship with: "I am not a man, but a machine."

There are three alternatives for a blind adult making plans for his future: 1) He may return to his family after his formal education is completed. If circumstances are favorable, and if he lives in a fairly small town, he may be of some use. He may become the organist in his church, he may

sing in the town chorus, he may weave baskets or rugs for fairs, or he may tune the one or two pianos which are used enough to warrant it. A woman may do much the same, or she may marry and run her own home, provided that her education has been at a progressive and practical school, with sufficient emphasis on home making and home economics. 2) Or, the blind adult with more specifically intellectual interests may remain at the school and become a teacher, a proctor, or hold a position created for his benefit. Such protection, after all, is not the fault of the school, but of a society which fails to recognize the blind as of equal economic value with the seeing. For the first alternative, the training he receives in a school for the blind would be sufficient—for the second a university education would be needed, made possible through a scholarship arrangement at the school. In neither case is it probable that the blind person, according to the usual standards of normality, would lead an average life. He would in both instances be surrounded by special contrivances, interests, and techniques which single him out as a person different from the majority. Perhaps this is as it should be. Perhaps blindness, like a difference in racial culture patterns and heritage, warrants a civilization different in all of its manifestations from that of the seeing.

The third alternative for the blind adult is economic adjustment in the world at large. This, from the psychologist's viewpoint, is the ideal. Here he enters industry or professional life on an equal footing with other competitors. Or rather, he should. The transition from the school to such an industrial or commercial world is almost violent. For this alternative it is highly desirable that the youth have some general educational experience, in a public high school, in a college or university, or in a technical school. Here he would rapidly acquire some technique of adjustment: either that of extracting as much as possible from his fellows and his instructors, and capitalizing on his handicap (a procedure by no means rare) or of accepting his deficiency and realizing that the extra effort must come from himself, and not from the rest of the world. The former sort of student does not belong in any sort of competition with seeing people; such a relationship is colossally unfair to all concerned. The latter, in a general school, would in four years' time have learned whether his place is in a world that is specialized or generalized in its treatment of him.

There is much need for research on this problem. Such men as Ritchie and French strongly advocate training the blind child up to the sixth grade with special tools and methods, and then putting him into a public school. The few reports and opinions available on the subject prove that they are just that: reports and opinions. The ideal method would be to make an objective comparative study of three groups equated for ages, intelligence and previous experience, one group to be educated throughout in a school for the blind, a second group educated in the public schools, and a third as Ritchie and French suggest. In such objective experiments and in no other way can satisfactory solutions be found. Opinions, ideas, and judgments, no matter what the competence of their possessors, are not a valid means of evaluating educational techniques.

The adjustment to scholastic requirements in a public school is difficult for any handicapped child. For the blind child it is especially difficult: he must have either a special tutor in braille with special books, and a reader, or be deprived of much subject matter. Furthermore the ordinary teacher is not prepared even to read the papers written in braille, to say nothing of checking arithmetical problems. The child must then, in nearly every subject, exert much more effort and energy to master the material, if indeed such mastery is possible at all. These problems are not present in a school for the blind, but others of equal importance arise. How far should we endeavour to parallel the courses offered by the public schools?

Should the attempt be made to have the courses similar in method as well as in material? What should be the proportion of the liberal arts courses to the practical? Is it wise from the point of view of individual adjustment to encourage blind children to prepare for college? Should there be any allowance for retardation because of their handicap when comparing blind pupils with the seeing on the basis of such tests as the Stanford Achievement Test? If there is such a retardation, should the grades be adjusted so that there are nine instead of eight before entering the four year high school course? Or should the child be retained in one grade? Personality adjustment may be easy or difficult according to the answers given to these questions.

The social adjustment of the blind child in an institution is conceded to be far better than that of the blind or partially seeing child in the public schools, or in the private schools for the seeing. Psychologically, this is a reasonable expectation. Naturally a blind child feels inferior when he mingles with those who are normally endowed—if he does not feel this difference of his own accord, his classmates are quick to remind him of it. Particularly in the first two or three years of school, the public school adjustment would be very severe, simply because the transition from home to school is far more abrupt for the handicapped child.

In a school for the blind, however, he competes with other children similarly situated. The slate is cleared for other activities, he is no longer in constant need of *proving* his equality to his fellow students, for they start on the same level with himself. The effect upon his personality is apparent: he no longer has to overdo his demonstrations, make excuses, or expect more from his friends than they are willing or able to give him. Many commentators, superficial observers and keen analysts alike, have made much of the theory that the blind as a group are under-socialized. There is some truth in this statement. I have seen scarcely a blind child who is not self-conscious in seeing-company —if he is used to being only with blind friends. In just such a situation his use of mannerisms or blindisms often begins. My own experience in teaching social etiquette to a group of blind children of the lower high and junior high school grades was enlightening. They were, in the first place, extremely curious to know about the discriminations and niceties of every day life. Not being in a position to observe them first hand, they seemed almost starved for information about correct behavior, and when once told they were only too eager to follow suggestions. Table manners especially became favourite topics for discussion—and for practice. Merely calling their attention to the weaknesses which they are bound to show, greatly improved their poise and self-assurance in public and social gatherings. Many of them, as one student expressed herself, "just hadn't even thought about things like that." Similarly my experience with dancing classes has convinced me that when a boy gains the ability to conduct himself properly on the dance floor, he tends to develop a conception of himself as socially equal to his seeing friends.

The general adjustment of the individual student to institutional life is a problem that has long been considered by educators in colleges and universities. For some reason it seems to be commonly neglected in private preparatory schools and institutions of the secondary level. Apparently children are deemed more easily adjusted than young people of college age. Such is not the case. The transfer of a child from a home to an institution is a very great event for any child; it is a violent social change for the blind child. In the first place he has more difficulty in becoming familiar with his physical environment. In the second place his social contacts prior to entering the school have usually been limited to his immediate family, and when suddenly thrust into a vast group of children, not only those of his own age but many older and younger, when he

comes into contact with many teachers and administrators, his confusion can easily be imagined. The assimilation of such a tremendous variety of experiences takes not only time for the child but wisdom on the part of those interested in his character training and development. The third, and probably the greatest difficulty is that these children, and the adults whom he meets, seem to take his blindness for granted, and to pay not the least attention to it, except in a purely casual and mechanical fashion. He is no longer the center of special attention and consideration as he was in the family group. He is just another student who has to make his way on the basis of his own special talents and abilities, not a child who is to receive a helping hand on the basis of his handicap. Under wise treatment of this sort I have seen a child, sensitive to the point of tears about his exceedingly poor vision (recently lost), become so interested in a village-building project that in six months' time he had become proud of the little vision that remained for him, since that made it possible for him to help the totally blind.

Many institutions have made laudable efforts to facilitate this adjustment, not only for the young child coming from home to school for the first time, but for the older child who transfers from the public schools. His educational adjustment is aided by the use of intelligence tests which point the way to approximate grade placement; his vocational adjustment is facilitated by the use of various dexterity and manipulation tests which have been very valuable in this field; and his social adjustment is helped by the cooperation of the teachers and the older students, and through free access to the office of the psychologist, with whom he may discuss his problems.

Although vocational and educational guidance courses were inaugurated in public schools some thirty years ago, and have received considerable attention in the past ten years particularly, schools for the blind have lagged behind in this respect. They have, of course, had vocational courses, and orientation courses of various sorts, and teachers and other workers have been most co-operative in regard to educational guidance, but there has been no formal organization of either educational or vocational programs, of individual or of group counselling to date. Perhaps the vocational field has been too limited to warrant the installation of a director or counsellor. However limited it may be, if the vocational scope of the blind is ever going to be widened, it will be through some such means, through painstaking research and careful experimentation, and even more important, through a positive rather than the traditional negative approach. The problem is acute—all the more so since that standby, piano tuning, has been outmoded.

Educational guidance, however, is in any school a necessary preliminary to vocational guidance. Too much emphasis on subject matter and too little emphasis on individual differences is not only a waste of pedagogical effort, but directly harmful to the child. Severe psychological maladjustment is often the outcome of much forced education—particularly education of the formal and disciplinary type. Let us consider a case in point. Here is an agreeable girl of fifteen, from an average family, brought to believe that it is her duty to herself and to her parents to do better than average work scholastically. Unfortunately the girl has an I. Q. considerably below the average, and the result is a constant struggle on the one side to justify her position to her family, and on the other side to maintain that position in school. The strain is terrific. She is a serious child, and considers low grades a catastrophe, as do her parents. At the end of every marking period she spends an hour or so in the psychologist's office weeping because she gives twice as much time to studying as other girls do and still fails. She usually changes her tears to contrition and self-condemnation, yet she is not to blame: it is her parents and the educational system that are pushing her beyond her capacity. She

has one course in which she excels—handcraft. She is very proud of her achievements here—achievements which unfortunately are somewhat scorned at home. Clearly this girl should be placed in vocational training courses of some sort. Her parents should be convinced that there is not stigma attached to a girl because she happens to handle needles with more facility than she handles numbers, and that a vocational training course would not only produce happiness, but possibly also economic independence. Unfortunately such problems are not all as easy to solve as this one, nor are all children willing to come to us unbidden with their troubles. But with the use of a battery of tests, with the aid of a psychologist or psychological counsellor, and an educational guidance advisor, similar difficulties may be ferreted out, and many a pupil's emotional, educational, and social adjustment made easier.

The most urgent need at present in the vocational field for the blind is research. Research from a positive rather than a negative point of view implies the compilation, not of a list of things blind people have done, but a list of things they could not possibly do. The rest should be considered as at least potential opportunity. The fact that no blind person has ever engaged in an occupation is now a deterrent to entering it. Even more ill advised is the drilling of youngsters with "success" stories until a boy thinks that he must be either a lawyer or a piano tuner, and a girl that she must become either a teacher or a dictaphone operator. Another custom has been to read to the children stories of genius—genius which happened to be afflicted with blindness. They sometimes glean, from such reports—From Homer to Helen Keller—the idea that they are somehow a race apart, chosen for higher things. From this it is only a step to the attitude of the blind person who believes that society somehow owes him success. Or perhaps a child hearing these tales has no particular ability—musical, journalistic, or oratorical—: then by a very logical process of deduction he concludes that he is bound to be a failure.

A reasonable procedure would involve first discovering a child's particular interests and aptitudes, and giving him every opportunity to develop them. The next step is to remove from his horizon those careers which his handicap would definitely exclude him from, and the third is to throw open a whole field of possibilities for which he as an individual with special abilities is able to do —not what he as a blind boy may do.

III. *The Psychological Aspects of Economic Adjustment.*

Toward the end of high school, vocational guidance becomes something more than a theoretical program. It is here that its practicability is tested, through its emergence into the placement aspect. It is here that the opportunity for research appears, the opportunity to check on the validity of tests, conferences, and final programs chosen for the students through the assistance of the counsellors. If failures and economic misfits predominate, our program is defective somewhere, and it is the work of counsellors and director to locate the weak spot. Trade schools, business schools—even public high schools—do considerably more in this field than do private and special secondary schools. It seems apparent that if ever study is necessary to determine the field most suitable for a student, if ever some intermediary between market and supply is needed, it is in a school for the visually handicapped, where business and commercial contacts and information are so limited. It would seem a wise proceeding to invite men from various occupations—not the successful lawyer, but the piano tuner, the mat weaver, the basket maker, and the stand operator, to discuss their practical problems informally with the students.

Probably the greatest source of bitterness among the blind is their economic inequality. There can be no covering up the facts in presenting a vocational course or in counselling a boy concerning his future. He

is bound to disappointment if the colors are too glowing. On the other hand, there is no need to discourage him. Probably the wisest procedure is to explain the prevalent attitude of employers toward the hiring of blind workers, and show the boy how he himself can help to overcome this attitude. He should probably be told that he must not only equal but excel the work of the seeing in both speed and accuracy before he will be given consideration on similar terms. He will thus be spurred to better work, and be less likely to resent his first contact with such discrimination.

With the present attitude of employers, the sheltered shop and the industrial home still play an important part in the employment of blind workers—perhaps the most important part. There are advantages in this sort of segregation. The blind boy has usually spent the better part of his life in a school where there are for the most part blind people, and he has adjusted his life to them. If he has to leave school and enter employment where there are no special tools, no special help, and where he is on an equal footing with seeing men, the adjustment will be well nigh impossible. On the other hand, in sheltered shop or industrial home he will once more be in an environment created for him, and there is scarcely any problem which he must face by himself—that is, any external problem. The internal problems may be most painful. For some people this sliding from school to industrial home is an excellent solution to their economic problem, but for the majority it is manifestly unfair, and they quite rightly resent it. For the blind man or woman as an individual, as an individual with ambitions, drives, desires, and above all, curiosity, this is not life, it is an imitation of life.

IV. *The Psychological Problems of Adult Adjustment.*

The treatment of the blind adult has two very different aspects. There is first the problem of the blind young man or woman who has completed his education in a school for the blind. Here many highly individual questions arise, social, moral, intellectual, and economic. There is another aspect, more difficult from the individual viewpoint, yet simpler from the social view. This is the problem of the adult who has become blind in later years. There is no need to emphasize its seriousness. The seeing have but to fancy such accidents to themselves tomorrow, and all descriptions of psychological upheaval become unnecessary.

If the training of the child in the school has been sufficiently complete in its social aspects, the first problem should be reduced to a minimum. There remains, of course, the important question of travel. The blind man who is able to get to any reasonable point by himself has a certain assurance and independence valuable for anyone. I believe that both the community and the individual would benefit enormously if more stress were laid on this ability. There is no reason, either, why mature blind girls could not travel alone in the daytime to reasonable distances. To date, they have been kept close to someone else all their lives. They are not allowed to take a step from school or from home by themselves. No doubt there are certain hazards at first, but the experiment would be worth trying, especially from the point of view of individual self-sufficiency—a point of view too seldom coped with. The feelings of social inadequacy and incompetence which result from dependence of this sort have a marked effect on personality adjustment. The most serious part of the problem, as mentioned before, goes back to early parental influences: the loss of the *wish* to be independent. They have grown so accustomed to being led, they have grown so used to guidance, both physical and mental, that they take it as their due, and become more and more sedentary and complacent.

As far as social adjustment is concerned, the newly blinded man has the advantage over those who have grown up without

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PRE-VOCATIONAL GUIDANCE FOR THE BLIND IN THE INTERMEDIATE DAY SCHOOL

MAUDE CHASE

The intermediate schools in Detroit, which enroll seventh, eighth and ninth grades, are in many cities known as the junior high divisions. With but three grades represented it is possible to maintain classes of the size to justify school activities which stimulate the expression of individual interests and abilities. This, one may interpret as the first principle of pre-vocational guidance for any group. In addition to this opportunity, a choice of curriculum is offered.

The work of the seventh grade is broad and general, while that of the eighth grade is exploratory in nature. When the pupil reaches the eighth or ninth grade, he is offered further opportunity for pursuing activities which most nearly satisfy his inclinations and he may develop his particular aptitudes through a choice of curriculum. These alternatives are the language, commercial, or the practical arts curricula. The language curriculum is recommended to pupils who intend to enter high school and there fulfill college requirements. The commercial is, of course, planned for the pupil who wishes to prepare for the various business occupations which include clerical or commercial work.

The practical arts curriculum is designed for those pupils who will early find their way to schools established to provide definite vocational training or perhaps may be forced to find vocational placement at the close of their intermediate career. This curriculum devotes much time to cooking, sewing and shop, but pupils who select this course devote the same amount of time as other students to English, social science and mathematics.

It should be stated that the program of studies of each curriculum has been selected because it provides the foundation for training for a specific type of life work. Thus, the nature of the intermediate program points definitely toward a vocational guidance program.

In order to understand how the braille class functions in a day school organization of this kind, a word of explanation is necessary. Students of the class are drawn from two elementary day classes and organized into a home-room where they receive the necessary special assistance from a trained braille teacher. Here, the teacher reads to them material which is not printed in braille, supplementary reading in braille is at their disposal, and they pursue activities which are not offered in the regular curriculum. These activities include rug weaving, basketry, knitting and crocheting in addition to typewriting, pencil writing and instruction in braille grade two. The musically inclined receive piano instruction in addition to attending the music courses offered in the regular grades. Students in braille classes participate in all regular grade recitations and discussions in the social subjects, thus obtaining contact with the seeing. Pupils are graded in these subjects by the regular class teachers.

Each intermediate school provides for the normal children counsellors whose duties are to advise students concerning curricula, make program adjustments, assist with social adjustments and in many other ways serve in meeting the aims as defined by the intermediate school. For braille students the special teacher is naturally the counselor. Provided with detailed information concerning each pupil accumulated throughout his elementary school experience which includes results of psychological examinations and their interpretation, this special counselor for blind children stands in a position to use the facilities of the intermediate school program in guiding and directing the child vocationally. If necessary, she may even cut across the lines of the curricula defined, guiding these children in

the selection of various courses which will best answer the needs of the individual child.

Various questions now arise. What practical experiences have come to the members of the braille class who have been a part of this picture How have they fitted into the scheme and how have they profited by this organization as it has been set up? These questions can best be answered by a series of illustrations showing how the blind pupil has become an integral part of the public school and how he may pursue courses which do develop his abilities, interests and aptitudes, all of which is the very basis for vocational guidance and training.

And now for the illustrations:

A— evinced a desire to enter the political field and was interested in civic and state affairs. His work in occupational information led him to spend the greater part of a day in the mayor's office. The mayor himself showed him the greatest courtesy, answering his many questions and making it possible for him to meet other city officials. His experience was indeed broadening and certainly was an added stimulus in his particular ambition.

B—had an intense desire to enter upon a stage career. Dramatics and auditorium were her greatest pleasures. A little effort enabled her to spend an afternoon back stage in the company of a well-known stage celebrity. The thrill of this experience will never be forgotten by the girl, and will serve as an inspiration for many years. She may not have the necessary personality for such work, but with the many radio opportunities, one may well imagine this girl before a microphone.

C— and D—were members of the household mechanics class. Their work was comparable to that of the majority of the class and they enjoyed it thoroughly. At the end of the term, when a recognition and achievement test was given, these two boys stood second and third in the class. Without question, this shop experience will serve in directing the students toward worthwhile vocations.

E— has useful vision. She wished to become a nursemaid or mother's helper. Home economics with emphasis on child-care was offered. The girl became as efficient in washing and dressing a baby as any member of the group. One may well imagine her being placed in this type of work through a satisfactory rehabilitation service.

F— is the type of girl who will doubtless remain in the home. Her program has been planned accordingly, and all types of handwork, particularly knitting, crocheting, cooking, and sewing, have been stressed. This has resulted in her piecing a quilt which took first prize in the children's section of a quilt show sponsored by one of the leading local newspapers.

G— has an ambition to become a lawyer and he seizes every opportunity that will aid him toward this end. Because of the qualities of leadership which he has developed he has twice been elected president of his English class. Several times he has been chosen to conduct jury panel discussions. One cannot help feeling that this boy is receiving proper pre-vocational guidance inasmuch as he possesses the mental equipment necessary to attain his desire.

H— cherished the hope of becoming a radio announcer. Although of a retiring nature, his work in occupational information spurred him to visit a local radio studio. He was given the opportunity to interview a well-known radio announcer, entirely forgetting his shyness in his eagerness for information.

I— was made president of the Glee Club. This is an extra-curricular activity, having as one of its functions the furnishing of the graduation music. I— made arrangements for all rehearsals, checked on absences, helped to plan social functions, and, in short, made a most efficient president. The Glee Club consists of approximately fifty girls. Since this student will probably never be faced with making her own livelihood and has a definite interest

in music, this doubtless furnished experiences which could be considered most worthwhile for her.

Not so long ago girls of the braille class gave a luncheon for the writer as a surprise on her birthday. It was held in the domestic science dining-room. They made the necessary arrangements with principal and teachers, planned and carried out all the details, and put the room in better order after it was over than had any other group, according to the statement of the domestic art teacher. All this seems to demonstrate that the practical arts student does have an opportunity for real laboratory experiences which serve in making home-makers.

These boys and girls also act as class secretaries, chairmen of study groups, and members of debating teams.

The above are only a few instances which demonstrate that the pre-vocational guidance received in the intermediate school is practical in that the child's own abilities and interests are the starting points for the teacher.

For those students whose intermediate school experience is a step toward *definite vocational training,* a plan has been devised whereby these students may enter the Michigan School for the Blind. Others, for whom immediate vocational placement is desirable, are referred to the State Rehabilitation Service. And there is always the smaller group who continue in the academic high school. Regardless of the course pursued, the many opportunities offered in the intermediate school for worthwhile pre-vocational guidance cannot help contributing to a well-balanced development which will result in more satisfactory vocational adjustment.

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of the Cross of Christ, that Cross of Victory through which man too may know victory in life and death. During the past twenty years, as choir members have upon graduation received the honor of the little cross, "The Circle of the Silver Cross" has been constantly widening; just what its significance may be, who knows?—only the Master in whose name the crosses are given.

The officers of the choir, elected at the close of each school year, for the next year, are: The President; Vice-president; Recording Secretary; Corresponding Secretary and Treasurer. These officers, together with the Choir Director, constitute the Executive Committee that appoints all the standing committees; namely, censors, critics and ushers.

Again referring to the constitution, we find this mention of the choir's activities: "daily meetings for rehearsals and chapel exercises, according to the school schedule; special rehearsals; called meetings and choir forums." Choir forums are held the third Saturday in October, and the second Saturday preceding the close of each semester. The choir forum program includes: a short study program, a question for discussion, a social hour and a business meeting. To cover the expense of these forums, each member pays twenty-five cents a semester.

As a result of the forum discussion, the choir members have formally voted to give annually a Vesper Service at Christmas and also one on Easter Sunday. It has been their pleasure too to establish the custom of singing carols at each season. As they go forth to sing in the darkness of the early morning, they carry an illuminated star at Christmas time, and an illuminated cross on Easter morn.

This group has also assumed the responsibility of a project, the objective being a fund for the construction of a little chapel, to be set apart on the campus, from the other school buildings, and dedicated to the worship of God. In their vision they see a House of God; a silent witness to the principle of religious freedom, which we, as a nation, boast; more intimately, they see a silent tribute to "Our Christ," whose way of life is one, whether the trail of the pilgrim is cast in physical light or darkness. The choir members have pledged themselves to a Project Vesper Service every year,

hoping through free-will offerings, taken at this service, to increase the chapel fund.

Though the fund grows very slowly, if the vision waxes not dim, the dream in time will come true!

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vision. He has already made his contacts in the world, and it is not likely that he will be dropped, either from the social or the economic sphere. He can still play bridge and dance, enjoy the theatre and music, and discuss literature or politics with his friends. He can still conduct his business—though he cannot play golf. On the other hand, the graduate of a school for the blind, though usually able to do these things, lacks the confidence needed for active participation. He feels sensitive. If he dances even better than his partner, he fears that she feels the necessity of guiding him. Throughout the contacts between the blind and the seeing the following undercurrent of introspection ensues: the blind think that the seeing think —while the seeing are afraid that the blind will think that they think just that. The whole of their intercourse is taut with a tension and a strain. The blind want their blindness to be forgotten, the seeing want to forget it so much that they bend over backwards. The question is carried a step further in the marriage problem. Many a man, blind from birth, feels that it would be an imposition upon a seeing woman to expect her to marry him, that is, an imposition upon the sort of woman who would enter into marriage on a partnership basis, not the sort that would have some exalted notion of a life-dedication. He should be taught to realize, what the newly blind seem to comprehend, that personality is constituted of a multitude of factors. Change in one aspect of it by no means affects the attraction or repulsion of the total in any marked degree. He must, in short, learn to think of himself not as a blind man, but as a man—who happens to be blind.

THE TEACHERS FORUM
for
Instructors of Blind Children

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A PARENT-TEACHERS ASSOCIATION IN THE VIRGINIA SCHOOL

M. GENEVIEVE COVILLE

For several years it has been customary at the Virginia School for the Deaf and the Blind to designate one day as Parents' Day. At this time as many parents as we could assemble have visited the classrooms and later met in a group with the superintendent and members of the faculty to discuss problems of mutual interest.

It was not, however, until April 2nd, 1935, that the parents took the initiative in organizing an active Parent-Teachers Association. The objectives of this organization, as defined by them, are threefold: to become acquainted with each other and with the personnel of the school; to become informed as to the policies and activities of the school; and to establish a basis for active co-operation between the Board of Visitors, the school and the parents.

The first objective establishes a friendly atmosphere and an understanding foundation upon which the work of the Association can be built. Not only does the parent become acquainted with the child's school environment but the teacher gains an added insight into the home environment.

There can be no unity of purpose or of accomplishment unless the problems and the needs of the school are recognized as

mutual problems and mutual needs. Under our plan the school then ceases to be merely a place where the child goes for nine months of the year and becomes a center of vital interest to the parent. It assumes importance as an educational institution responsible for certain definite phases of development in the life of the child. The home and the school cease to exist as separate entities and become two institutions having as a common aim the education of the child.

The second objective is attained through a greater and more understanding interest, and so leads to a closer relationship between the school and the home. An intelligent survey of the policies and the activities of the school tends to clear away doubt or distrust and will establish confidence and respect.

With the aims and objectives of the educational plan clearly in mind, the parent may check on the various stages of his child's development. He will be in a position to judge the child's progress and to offer valuable suggestions. The parent may know and be able to interpret various attitudes of the child and may materially aid in shaping his vocational training.

During the vacation period, the informed parent may see the total result of the session's work while the teacher, working daily with the group, does not have the same opportunity. To aid in this, the Virginia School for the Blind formulates vacation activities which are systematically carried out under the supervision of the parents. The Parent-Teachers Association helps to augment and intensify this work which has already resulted in untold benefit to the blind children. Since the handicapped child especially needs individual guidance and training, this mutual interchange of ideas between parents and teachers is bound to help in the formulation of more definite and individual objectives.

The third objective of the organization should lead to understanding, to good-will, and to loyalty—three essentials in any worthwhile undertaking. This may aid in securing legislative action when needed. Objectives already set up by the new organization are: the securing of a gymnasium; an adequate infirmary for the school; and a field agent to locate children who are eligible for admission to this school but who are not in attendance.

The parents themselves act as agents of publicity and good-will. They create in the State an awareness of the school, its functions, and its accomplishments. To them it is now "our school" and, as such, an institution as important as the home. The establishment of the Parent-Teachers Association is one of the most progressive steps ever undertaken in the history of the Virginia School.

The annual meeting of the Board of Trustees of the American Foundation for the Blind was held on Monday afternoon, December 14th. The following officers were elected: M. C. Migel, New York, President; Miss Prudence Sherwin, Cleveland, Vice President; William Ziegler, Jr., New York, Secretary-Treasurer; Members Executive Committee, M. C. Migel, G. A. Pfeiffer, William Ziegler, Jr., Otis H. Caldwell, H. R. Latimer, Richard L. Morris.

Our Contributors

Dr. Samuel P. Hayes, Professor of Psychology at Mount Holyoke College, South Hadley, Mass., contributes an interesting translation of a chapter from Friedrich Zech's *Erziehung und Unterricht der Blinden.*

Miss Anna May Sansom has been supervisor of music and director of the choir in the Iowa School for the Blind for a number of years.

Miss Marjorie Fiske is psychologist for the New York Institute for the Education of the Blind.

Miss Maude Chase is a teacher in the braille classes of the Detroit Public Schools.

The editorial for this issue is contributed by Mrs. M. Genevieve Coville, Principal of the Department for the Blind, Virginia School for the Deaf and the Blind.

The Teachers Forum

FOR

INSTRUCTORS OF BLIND CHILDREN

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TEACHING TYPING IN THE WISCONSIN SCHOOL FOR THE BLIND

CARL ENGLER

HANDICAPS OF THE BLIND PUPIL

The fundamentals and the principles on which the art of typewriting is based are the same, whether they be taught in a school for the blind or in a school for the seeing, but the method of teaching, the subject matter, and the scope and objectives of the course are radically different in a school for the blind.

The average blind pupil needs to have only a sufficient mastery of the typewriter to permit him to do his written schoolwork in typing, to write tests and letters. There is no definite commercial objective; he does not ordinarily plan to earn his living through the use of the machine, but to use it merely for his own personal convenience. From that standpoint alone, typing is much more important to the blind pupil than it is to the seeing pupil. The latter can use pencil or pen and ink, but the former, unless he is writing to another blind person and uses braille, is practically forced to use the typewriter unless he wishes to disconnect himself entirely from written communication with his seeing friends or associates.

In most schools for the blind, the majority of academic teachers are of necessity seeing. Written work done for them by the pupil may best be done on the typewriter. Consequently, the age at which typing is first taught in schools for the blind is somewhat lower than it is in the regular schools.

There is only a limited supply of suitable material which a blind pupil may copy for practice purposes. The seeing pupil may copy from books, magazines, newspapers, and pamphlets of every sort and description; in fact, his source of supply is practically unlimited.

The seeing pupil can do two things at once. He can see the material and type it at the same time. The blind pupil must laboriously read with his fingers as much as he can retain with his mind and then transcribe it on the typewriter.

The blind pupil must be a good speller if he wishes his work to be perfect; the seeing pupil may be a poor speller and still do perfect work in typing because of his ability to see and correct his product.

Thus it is plain that the blind pupil is working under several handicaps, all of which militate against perfect work unless the pupil is exceptionally gifted or unusually industrious.

The method of transcribing in itself keeps the pupil from mastering the three fundamentals of the mechanics of typing—rhythm, accuracy, and speed—and without these, efficient typing is out of the question.

After the mechanical requisites have been mastered, then, for perfect work, the pupil must be well versed in spelling, punctuation, and grammar or English. The value of sight in acquiring this educational background is almost inestimable. The difference between thinking in terms of braille dots and in terms of the print alphabet is a decided handicap in many ways, particularly in spelling.

Then there is the matter of cost and of keeping a braille library up to date. Braille books are more expensive than corresponding print books. A print text can be easily revised from year to year; the same process in braille would be almost prohibitive from a financial viewpoint.

Thus it can be seen that from several standpoints the problem of teaching typing to the blind is a much more difficult one than it is in regular schools for the seeing. To overcome some of the above-mentioned difficulties, the teacher in a school for the blind is forced to do a great share of her work by dictation. This immediately raises its own problems. For example, the acoustics of the room must be considered. Many

times there is a defect in hearing which accompanies blindness and for this allowance must be made. The noise and clatter of the machines act as a distraction and so produce a psychological as well as an auditory problem. Not all blind pupils write at the same rate of speed, so the teacher must gauge the rate of dictation at some happy medium between that of the fastest and the slowest typist. Since the pupils cannot see, they are unable to exchange papers and correct them; consequently, the teacher is forced to correct many more papers than the teacher in a regular school. Finally, because of the inherent limitation of tactual reading—the almost unbelievable amount of time necessary to cover a lesson assignment—along with the very heavy schedule that the average blind pupil carries, very little time is left for anything beyond the required work and this automatically prevents the pupil from forming a liking for many things which will be of inestimable value to him as he goes on through life. The seeing pupil can use a pencil or, tiring of that, pen and ink; the typewriter is still available as a third method. The average blind pupil has to follow one definitely prescribed method or means of communication; namely, the typewriter.

Fortunately, the task is not as hopeless as it sounds. In most cases, the beginning blind typist is so young that he is highly receptive and responsive to the demands for learning all about this new "toy," so it is a pleasure to teach typing to blind pupils and to see what can be accomplished when the will to do exists and where the never-say-die attitude helps them cheerfully to surmount whatever obstacles may be in the way.

The Physical Set-up

For the past ten years the writer has been the commercial teacher at the Wisconsin School for the Blind, where typing has been taught for forty years or more.

The present set-up is as follows: Typing is first taught in the fifth grade and then continues as Typing II, III, and IV through the sixth, seventh, and eighth grades, respectively. Where conditions and accomplishment warrant doing so, bearing in mind the objectives of this course, pupils are passed from Typing I to any of the other grades, irrespective of the proper sequence. For example, the average age in the fifth grade is twelve. A new pupil may enter the school at the age of fifteen or sixteen. He will, of course, take typing with the regular Typing I class. Because of his relatively advanced age and also because of his maturer background in the educational requirements for typing, he will ordinarily make such rapid progress that he may be passed directly from Typing I to Typing III or even to Typing IV. In this way, the pupil is not burdened with two or three years of unnecessary work, and due to the promotion, his interest in the subject is maintained. Also, a more uniform grading results in all classes, so that those who need several years of instruction and supervised practice will receive them and those who do not need this training will be rewarded by prompt advancement. From the ninth grade to the Senior year, typing is not taught as a regular subject. During the last year in school it is taught as Senior Typing. Practically all pupils who have passed Typing IV use the typewriter daily during the intervening years and many times pupils are ambitious enough to come into one of the regular classes of their own volition in order to keep in good typing form.

The average enrollment in the department is seventy pupils.

The department has thirty-two typewriters; eleven Remingtons, eleven Underwoods, and ten Royals.

In addition, two transcribing dictaphones, a recorder, and a shaver for the records help to ease the teacher's task with the exceptionally talented typists.

The department at present has no portable typewriters but it is hoped that appropriations will be allowed for this desirable addition. The blind pupil, in nine cases out

of ten, will use a portable after graduation, if conditions and finances permit him to do so. During the Senior year, much outside work is done and seniors are permitted to carry the regular machines up to the fourth floor for use during the evening or over weekends. Portables would lessen the difficulties arising from this system. Furthermore, this school conducts an eight-weeks' summer school course for the adult blind and here the advantage of having portables to teach is obvious.

The Time Schedule

School starts officially every morning at eight o'clock with an assembly period of fifteen minutes. Then, from 8:15 until 11:55, except for a fifteen-minute recess from 10:15 to 10:30, five forty-minute periods are conducted. In the afternoon, four periods are conducted from 1:10 until 4:40, except for a ten-minute recess from 3:10 to 3:20.

Each grade in typing meets once a day for five days a week during the thirty-eight week period that school is in session. Sometimes, because of size, one grade is divided into two or even three classes, coming at some period during the day when the least conflicts occur.

Senior Typing meets only three times a week, the other two days being shared with the gymnasium department.

Objectives of Each Grade

The work in Typing I centers chiefly upon the operation of the typewriter, such as the keyboard, the names of the parts commonly used, mechanical features, and care of the machine. Spelling, grammar, punctuation, simple dictation, simple designs, friendly letters, post and postal cards, and addressing of envelopes are the main objectives.

The work of Typing II, in most cases, is a review as well as a continuation of the same objectives as Typing I, except that the nature of the work is changed to give alternatives to dictation in order that reading and writing braille at the same time may be facilitated. Accuracy exercises, speed work, and business letters are introduced whenever the class seems ready for them.

The work of Typing III centers mainly on accuracy. More difficult dictation, more difficult letters, tabulation and outlining, centering, designing, accuracy exercises, speed tests, statistical work, interesting and pertinent facts, poetry, and book work are the main objectives.

The work of Typing IV is the same as that of Typing III except that the material in all cases is more difficult. Such individuals as are able to do so learn to change ribbons and to clean and oil the typewriter. Accuracy and spelling are strongly emphasized. Where conditions warrant, the dictaphone is introduced.

Since there is a break of several years between Typing IV and Senior Typing, the first part of the latter year is devoted to a review of the work of the previous years. The subject matter is carefully selected as to content and difficulty. Current and timely articles are selected from the leading magazines and newspapers. All objectives of Typing IV are concentrated upon to a higher degree and, in addition, much attention is paid to English and grammar exercises.

From this summary, it will be seen that the work of the department is quite comprehensive. Much of the material will, of course, never be used, but it gives the blind pupil an idea of what can be done on a typewriter and, by comparison, makes his limited objectives so much the easier.

Introduction to Typewriter

When a pupil first enters the department, he is permitted to run his hands over the machine to "get the feel" of it. In most cases, the typewriter at this stage of the game seems more like a toy to the pupil and consequently he is extremely enthusiastic. The teacher must be prepared to answer a barrage of questions about "this doodad," "this what-you-may-call-it," "this jigger over here," "this thing," etc., and when the air is sufficiently saturated with these vague terms, the teacher begins to name each part

and explain its function. This process will have to be repeated many times before the technical names become a part of the pupil's vocabulary.

The insertion of paper is next explained. The correct method of doing so is demonstrated but the pupil is not discouraged from inserting it in his own way so long as the correct result is obtained. In the process of inserting paper, such parts as the paper table, lateral paper guide, paper fingers, paper bail, paper release, and rising cylinder scale are introduced and discussed.

The setting of the margins is next taken up. Such parts as the front or marginal scale, marginal stops, space bar, back spacer, thumb piece, and carriage frame pointer are indicated and learned. The manner in which the margins are set is explained for each make of machine. On the Underwood, for example, the front scale has ninety spaces. The margins are usually set at five on the right and seventy on the left. The right marginal stop is first pulled to the right as far as it will go or to zero on the scale. The carriage is then pulled to the right. The space bar is now struck five times, after which the right stop is moved to the left as far as it will go or to eighty-six. The left stop is then moved to the right until sixteen clicks have been counted, which will place that stop on seventy. On the Royal, the marginal scale has ninety-one spaces, minus six on the left and eighty-five on the right. The margins are pushed in their respective directions and the carriage pulled to the right; the space bar is struck three times; the left stop is pulled to the right or to minus three; the carriage is moved to the left; the back spacer is struck twenty times; and the right stop is pulled to the right.

In like manner each operation is explained for each make of machine. Each process will have to be explained repeatedly since it differs from one model to another. As each process is discussed, the correct names of the parts directly concerned with that particular operation are impressed on the pupil's mind.

The keyboard is next introduced in a general manner, followed by a demonstration of the correct posture at the typewriter. For the first lesson, the home row or second from the bottom is studied. The position of the fingers on the keys, the action of striking the keys, the position of the thumbs and the wrists, and the numbering of the fingers are explained. The making of capitals and the use of the period are explained when their use is demanded.

After the home row has been thoroughly mastered, the remainder of the keyboard is introduced two letters per lesson. For example, these combinations work very nicely in conjunction with the home row: e and i, r and u, t and y, w and o, v and m, q and p, b and n, c and comma (,) and the shift on comma or question mark, and x and z. There are about twenty sentences to practice for each combination of keys studied. The pupil writes each sentence and, if it is perfect, goes to the next; if a mistake has been made, the sentence is re-written until it is perfect.

Regardless of the size of the class, individual work is very desirable here to allow for individual differences. Rhythm and accuracy are stressed very strongly at this point.

After the pupil has completed the preliminary lessons, words are selected from the letters found only on the home row, such as flask, shall, glass, flag, alfalfa, etc. Then words from the third row are chosen, such as queer, pepper, witty, typewriter, etc. Then exercises are given in which the second and third rows only are used, the second and first rows only, and finally the entire keyboard.

At this stage, the alphabet is introduced. At first the pupil practices the alphabet just as it is ordinarily recited. Later, for a combination of typing technique and concentration, the following exercise is practiced: a ab abc abcd abcde, and so on until the entire alphabet is written. A third

exercise goes like this: aa ab ac ad ae; ba bb bc bd be; ca cb cc cd ce; and so on until the entire alphabet has been covered. Alternating left- and right-hand words make an excellent exercise. Here may be used such words as: zebra, lily, sweater, opinion, sea-breezes, onion, etc. A still more advanced form of practice is the use of alphabetical sentences.

By this time the pupil should have been told about the bell and how to keep the right-hand margin fairly uniform by going at least five spaces past the bell at the ends of the lines. This will also call for an explanation of syllabication, or the proper division of words into syllables.

While it has taken only a short time to write all this and will take even a shorter time to read it, the principles of typing and the practices outlined may cover, depending largely upon the individual, anywhere from one week to nine months. It is during this period that the foundation is being laid for either good work or bad and, consequently, rhythm and accuracy and painstaking attention to detail cannot be too strongly emphasized.

Numbers and Signs

The pupil is now ready to take up the figure keys and the use of the signs which are made by shifting on the figure keys. The fourth row of keys is taught through association with the home row. The pupil should learn to reach up from the home row and a little to the right and should learn to think in terms of the home row rather than of the fourth; for example, the left side of the home row has the keys a, s, d, f, and g, and thinking now of the numbers, a becomes 2, s becomes 3, d becomes 4, and so on all the way across.

The importance of staying on the home row, reaching up to the fourth row, and thinking of the numbers in terms of their associate keys on the home row, must be insisted upon if accuracy is to be attained. Moving both hands to the fourth row and counting along until the desired number is reached should be discouraged because it results in errors and at the same time destroys rhythm. The following exercises are recommended: write the numbers from 1 to 50 by even numbers; write the numbers from 51 to 99 by odd numbers; write sentences which contain numbers.

After the figure keys have been thoroughly mastered, the shifts of the keys are studied.

The shift on 2 has four common uses: quotation marks, sign for inches, sign for seconds, and ditto marks. It is quite obvious that its use as ditto is very infrequent. As the sign for inches and for seconds, it is used quite often. However, its most common use is that of the quotation mark.

The shift on 3 is used as a number sign when it precedes the number and as a pound sign when it follows the number.

The shift on 4 is the dollar sign.

The shift on 5 is used as the per cent sign after a number and as "in care of" when it precedes a name.

The shift on 6 is the underscore and is used to indicate emphasis. Horizontal lines may be made by using the underscore. There is no way of indicating italics on the typewriter, so the pupil is given the choice of using quotation marks or underscoring the word.

The shift on 7 is the ampersand, or "and" sign, and is used for "and" when writing the name of a company.

The shift on 8 has six uses: the apostrophe, to indicate the omission of letters as in o'er, e'er, and o'clock, and in contractions such as isn't, won't, and aren't; part of the exclamation point, which is made by shifting on the 8, back spacing, and striking the period; quotation within a quotation or inner quotes; the sign for feet; and the sign for minutes.

The shifts on 9 and 0 are the opening and closing parentheses, respectively.

The last key on the right side of the fourth row is the hyphen, which is used mainly for dividing words. Horizontal lines may also be made with the hyphen. The

shift on the hyphen is the star, or asterisk—used in writing footnotes—on all machines except the Royal, where it is the fraction three-fourths.

The last key on the right side of the third row is the fraction one-half and the shift is the fraction one-fourth.

To the right of the semicolon on the home row is the cent sign, while the shift is the "at" sign. The cent sign is ordinarily used with amounts less than one dollar. The newest keyboards now replace the cent-sign key by the exclamation-point key which has the plus sign as the shift.

To the right of the period on the first row is the slanting bar, used in making fractions not found on the machine. The shift is the fraction three-fourths except on the Royal, where it is the question mark.

Small x is used as the "times" sign when there is a space before and after, and as the "by" sign when there is no space before and after. For example, "two times two is four" would be written "2 x 2 is 4"; "the room is thirty feet long by twelve feet wide by ten feet six inches high" would be written "The room is 30′x12′x10′6″."

The division sign is made by striking the colon and then back spacing and striking the hyphen.

The minus sign is the hyphen with a space before and after.

The plus sign is best written out except on those keyboards where it is the shift on the exclamation point.

The equal sign is best written out, also, but it can be made by striking the hyphen, back spacing, depressing the shift key just a trifle, and striking the hyphen again.

Mixed numbers are written in two ways, depending on whether or not the fraction is found on the keyboard. For example, 12½, 2¼, and 9¾ are written as shown; that is, the fractions are written with a numerator and a denominator and could not be read as anything but fractions; 6-7/8, 1-2/3, and fractions of this type are written with the hyphen and the slanting bar. The hyphen is necessary to prevent a misreading of the whole number.

The sign for degrees is made by rolling the platen slightly toward the typist, striking small o, and allowing the platen to roll back to its normal position. The square and the cube of numbers in algebra may be written in the same manner.

Vertical lines may be made by using the colon.

The period is also used as the decimal point and as an ellipsis.

Appropriate exercises should be practiced at frequent intervals until all these characters are firmly established in the pupil's mind. There is work enough here to cover a good many class periods during the school term. It is true that not all blind pupils will use all of these signs. After the pupil leaves the school he is privileged to forget those which he will not need and to remember only those which he will need. Re-learning will be very easy after this careful work in school. These things must all be taught in a typing course to show the pupil what can be done on the typewriter.

Letters, Envelopes, and Cards

The stage has now been reached when the teacher will be besieged with requests for permission to write letters; so, working on the theory that "there is no time like the present," letter forms and the addressing of envelopes should be introduced at once. At first the pupil will be interested mainly in friendly letters. The five parts of this type of letter are explained and the position that each occupies in the letter is demonstrated on the typewriter. To illustrate: the heading of a letter consists of three lines; the street address, the city and state, and the date. It is written at 45 on the front scale of the Underwood and the Remington, and at 39 on the Royal. The salutation is written double-space up from the heading and at 5 on the scale of the Underwood. Then comes the body of the letter, which should be broken up into paragraphs. Doubled up from the last paragraph and at 40 on the

scale comes the complimentary closing and at the same margin doubled up comes the signature.

There are two common forms for friendly letters: block and indented. Usually, block form is taught because it requires no punctuation at the ends of the lines in the heading and the margins, for each respective part of the letter begins at the same place on the scale.

The idea of using paragraphs and keeping the various ideas properly segregated should be emphasized strongly because there will be a tendency to "start with apples and end with zebras" all in the same paragraph. Fairly short sentences are to be preferred to long, complicated ones, and they should be thought out before they are written.

After the letter has been finished, the proper way to fold the paper is shown. Holding the paper as it comes out of the machine, the bottom edge should be carried up to the top edge, the middle creased evenly, and then this half folded over by thirds.

Before the letter is inserted in the envelope, the pupil is shown how to address the envelope. It is held in an upside-down position with the flap toward the pupil and rolled in until there is just enough room for one line of writing in the upper left-hand corner where the return is written. The envelope is then rolled up nine spaces and the margin of the typewriter set at 30, where the address is written. Anything pertaining to the address should be placed on the second line, such as the street address, % Mr. John Smith, or R. F. D. No. 1, Box 25; and anything not pertaining to the address, such as "Attention Mr. John Smith," "Personal," "Private," or "Please Forward," should be placed in the lower left-hand corner of the envelope.

In connection with envelopes and letters, the directions for addressing and writing on the ordinary government postal card are studied. The card is addressed in exactly the same way as an envelope except for the return, which is omitted. This card usually has room for forty-five spaces across and for fifteen lines up and down. The pupil is taught how to set his margins on each make of machine so that his writing will come within the limits just mentioned.

Other Projects

The outline of the course so far presented could very easily represent the total objectives for the average blind pupil. If he masters everything studied this far, he will have an adequate background of typing which will answer all the purposes he has in mind. However, the scope of the course can be extended and the interest in typing definitely accentuated through the introduction of such particular projects as centering, poetry, tabulation, statistical charts, outlining, and designing. Unfortunately, space does not permit a detailed description of these highly interesting subjects; they will therefore be dealt with rather briefly, and if readers of this article desire more specific information about any of them, the writer will be more than happy to answer any communications.

Centering

Centering can be used for the study of concentration as well as to give the pupils a change in the type of work. Perfect copies of work done should be put on display. The general rule to follow in centering is this; count the number of letters and spaces in the title, take half of this number, and subtract from 33 on the Royal and Underwood and from 35 on the Remington, and space out that many times from the regular margin. Many interesting variations can be made and some really artistic papers produced.

Poetry

The writing of poetry usually appeals to children. They should be encouraged to make perfect copies for display purposes. To center a poem, the following procedure is used; count the total number of lines in the poem and subtract from sixty-six, the total number of lines available for use on a sheet of paper, take half of this number, and roll the paper up that many times from

the top edge of the paper. Then the longest line of the poem should be centered and the margins set accordingly.

Tabulation

The principles of tabulation will enable the pupil to properly space any number of columns of words or figures across the paper and save him much spacing in letter writing. The manner of setting the tabs is different for each make of typewriter and the process is too involved for discussion here. However, the steps leading up to the actual setting of the tabs can be presented. Find the number of spaces in the longest word in each column, add these and subtract from the number of spaces between margins. This figure is divided by one less than the number of columns to be written. The quotient represents the number of spaces to be allowed between columns. Then the actual setting of the tabs is taken up.

Statistics

Statistical charts, if written perfectly, afford the pupils a great sense of achievement and mastery. These charts can only be made from the teacher's dictation. All the necessary spacing and margin setting and details of the chart must be worked out by the teacher and then dictated to the pupils.

Outlining

The principles of outlining should ordinarily be taught because of their practical value. The pupil is called on many times during his school career to do work in outlining. This particular project can be nicely correlated with that of tabulation.

Designing

A very delightful project which always interests the pupils and which permits an excellent display of work done in the department is that of designing. These designs may range from extremely simple to decidedly difficult. There are many variations of the "star" design, the "diamond" design, and the "checkerboard" design. Then there are beautiful pieces of work such as "a ship," "a butterfly," "ladies at tea," "the Dewitt-Clinton train," "Independence Hall," "dogs," etc. These designs are excellent tests of concentration and, when perfectly written, represent achievement to the pupil and give the teacher something tangible to show for her efforts. Much time and labor is necessary to evolve and perfect a design but the finished product is ample payment for the energy used.

Cooperation Between Teachers

One procedure which is highly recommended is cooperation with other departments of the school. The teachers of arithmetic and algebra may inform the teacher of typing what work is being covered and the latter may use the same work during dictation periods in typing. The same procedure may be worked out with the teachers of English, history, and geography. The pupils, in this way, accomplish two things: typing practice and the opportunity of studying another subject simultaneously under supervision. It also enables the teacher of typing to check up on the kind of work the pupil is doing for the other teachers; this follow-up is not only instructive to the teacher but positively necessary in many cases for the pupil's own good.

Things to Watch

There are a few typing techniques to which attention should be called. The correct method of making capital letters should be insisted upon to avoid the production of faulty capitals. There should be constant supervision and practice for a uniform right-hand margin. Rhythm should be practiced daily to avoid the piling up of letters. Strikeovers should be discouraged and, during class time, absolutely forbidden; the back-spacer habit is most annoying and very hard to break. The correct spacing between words and after punctuation should be watched closely.

Concerning the typewriter itself, there are several things to check before the pupil starts to write. If the paper release is on, the paper cannot be rolled into the machine. If the stencil lever is on, no writing will show on the paper because the ribbon is

locked. The paper guide should be in its proper position before the paper is rolled in. The line space gauge should be checked. The variable line space push button should be checked to prevent the pupil from writing on one line continuously. It is well to see that the ribbon is reversing properly. The setting of the margins and the checking of the paper fingers should, of course, become an automatic process with the insertion of the paper.

Specal Problems

A few special problems which have a bearing on the typing department should be mentioned. The type of equipment as mentioned in the first paragraph is a definite problem. The appropriations which will permit the department to be kept up to date in the matter of equipment are most vital. The size of the school and the enrollment in the department will greatly affect its success. Finally, there is the problem of pedagogical method. Teaching typing need not be a dull, uninteresting, or prosaic task. The teacher should teach the individual first and typing secondarily; with that ideal in mind, the typing department should turn out happy, well-informed, well-instructed, and ambitious typists.

Conclusion

The concluding paragraph has been reserved for a brief mention of three indirect but extremely important influences on the success of any department in any school, namely: the superintendent, the principal, and the faculty. The Wisconsin School for the Blind is fortunate indeed in having a most able and progressive educator at its helm; one who is not hidebound by tradition, but is constantly seeking new fields of endeavor for the blind; and who has the interests of the blind at heart personally as well as professionally. The principal is understanding and sympathetic in his contacts with the blind. The faculty members are very cooperative, a most necessary element for the success of each department as well as of the school. A happy combination of these three background influences will produce results which, while they may not be immediately effective or noticeable, will be recorded in future history as definite forward steps in the education of the blind.

FOUNDATION LIBRARY NOTES

The magazine *Recreation* for February, 1936 contains an article called "Marionettes for Blind Children" by Elizabeth Haines. The author of the article raises the question, "Do blind children really enjoy performances they cannot see?" and answers it definitely in the affirmative. The performances were given as an annual feature at the Pennsylvania Institution for the Instruction of the Blind. It was found that some adaptation had to be made. Plays were selected that had plenty of action, and whose dialogue carried the plot.

The article "Braille Enters the Realm of Music" in the *Red Cross Courier* for February, 1937 gives an explanation of the braille music notation as it now stands. An exhibit staged as a practical demonstration of the blind memorizing their score was given at the Great Lakes Exposition held in Cleveland last summer.

School Life for November, 1936 in an article called "Service for the Blind" by Susan O. Futterer offers the story of the efforts by the Library of Congress to provide reading material to the adult blind either in the form of braille books or as Talking Book records. Mention is also made of the forty-five thousand braille maps produced at Perkins Institution and financed and distributed by the WPA to seventy-eight schools for the blind in this country.

The *Wisconsin Journal of Education* for March, 1936 devotes some space to a description of the Wisconsin School for the Blind written by its Superintendent, F. M. Longanecker. The writer starts out by stating "There is probably no branch of the state's educational system about which there is greater misunderstanding or perhaps lack of understanding than that branch which has to do with handicapped children."

THE EDUCATION OF THE BLIND: A SURVEY

Reviewed by KATHRYN E. MAXFIELD

Edward Arnold & Co. London, 1936. pp. xxiv 344. (Distributed by the American Foundation for the Blind, $2.)

Recently, there has been published in England a survey of the education of the blind which was made by a committee appointed jointly by the College of Teachers of the Blind and the National Institute for the Blind. Contrary to the usual nature of such reports this one is extremely readable. Although one is given the impression that the different sections of the report were by different authors, all of the chapters are not only well written but interestingly so.

The second section expresses a healthily balanced educational philosophy and it shows real understanding of the problems which confront not only the blind child but the teacher of that child. There is a temptation to quote liberally from this section, but two illustrations will indicate the discernment shown by the committee:

"What these desired ends of education are we have tried to express in our definition of education, in which we suggest that the ultimate test of a good education is to be sought in the realm of values. A man has been well educated if within the limits of his experience and understanding he has learnt to recognize what is good and true and beautiful, and if to the limits of his capacity he has been equipped to pursue it. To know, to desire, and actively to pursue the things of greatest worth in the spheres of social and personal values are the marks of a good character, to the making of which all educational efforts should be directed." (p. 42.)

"We suggest, then, that there is as yet little value in seeking to institute an exact comparison between the degrees of intelligence of blind and seeing persons. What we want to know about the blind is not how much more or less intelligent they might have been if they had been able to see, but how the intelligence they actually possess may best be developed. To this end intimate studies of the growth of the mental powers of blind children, showing the kind of materials by which their minds are nourished and the kind of interests upon which they fasten, should prove a far more fruitful line of research than that offered by the tabulation of intelligence quotients computed according to a conventional scale. The value of any research should be rated mainly by the contribution it makes to the improvement of teaching method and the light it throws upon the objectives of training." (p. 59.)

The value of intelligence tests for the blind is fully appreciated but so is the need for other types of research which will be of fundamental importance in establishing a better understanding of the blind child's mental and emotional life. Stress is laid on the need for activity, the development of right attitudes, the bringing of the child into contact with experience rather than waiting for him to find it, and so forth.

Section three contains chapters dealing with The Curriculum, The Pre-school Child, The Infant School, The Five Years from Nine to Fourteen, and The Age Period from Fourteen to Sixteen. Here no attempt has has been made to urge specific methods or educational doctrine, but every page informs the new teacher, and recalls to the experienced teacher those special points which need to be kept in mind by anyone who would lead blind children into a full and rich life among the seeing.

Section four has to do with continuation courses, both vocational and non-vocational. Considerable stress is placed upon the importance of the non-vocational courses for most continuation school pupils. Because of the different arrangement of our school program in this country much of this non-vocational work would have been had by our blind pupils during the course of their high school training and before they specialized

(*Continued on Page* 78)

DOCTOR ALLEN SAYS:

"It may well be that the most ignorant shall teach us most." (Earl Barnes)

A generation ago some thirty men actively interested in child nurture—specialists in education, psychology, psychiatry, biology, medicine, surgery, and public welfare—began spending two Saturdays a year together at the Training School in Vineland, N. J. Director Johnstone, its *genius loci,* drew us there. None could afford to be absent; for a day in the atmosphere of this simple community apart always enthralled us. It led to the above prophesy.

At first we were "The Gang," then by courtesy, The Paidological Staff; but we called ourselves The Feeble Minded Club. Our host and fellow-member took us everywhere—over cottages and school, over barn and farm. Smiles met us at every turn, a happy face signifying "I belong." Arriving at chapel we saw how a real leader shepherds his flock. Ah, it was a united family which presently marched out singing "Onward Christian Soldiers" to raise the roof. After our dinner of good things grown, prepared, and served by these children "who never grow up," we reassembled to talk over the thoughts our visit had suggested.

Once, after Dr. H. H. Goddard, a member adapting Binet's tests there, had explained their significance, Johnstone said to Principal Burritt and me: "Get a man like him and start testing your pupils. It's the coming thing." In 1916 we began, using the tentative scale for the blind which the ever alert Robert B. Irwin had meanwhile worked out with Goddard at Vineland, and which Dr. T. H. Haines of Ohio State University had applied to measure the pupils at Columbus. Fortunately Burritt found Dr. Hayes, Professor of Psychology at Mount Holyoke, interested to organize a clinic at Overbrook; and soon this expert headed ours at Watertown also. He was tactful—had to be, since experienced teachers often resent being told overmuch by psychologists; besides, many an older pupil dreaded tests which he thought might show him up unfairly. But Hayes, having installed a special graduate of his own at each school and begun regularly sending two others to take my yearly course, found that his leaven worked, especially after he had shown in talks that modern psychology is largely the scientific study of our common behavior habits.

His early work resulted in a manual of achievement tests, his later in the Binet-Hayes Scale for the Blind, with a guide for its use.

Dr. Kathryn Maxfield had come to Perkins from Mount Holyoke. Before going to the American Foundation for the Blind, her findings had considerably influenced our curriculum of studies. So when in 1927 she proposed the opening of an experimental school somewhere, we turned our whole elementary department of 120 children into such a project, carried on jointly by the Kindergarten and the Foundation, and put it under Dr. Frieda Kiefer Merry as supervisor. Tho already a Ph. D. Mrs. Merry immediately took the Harvard Course. Our people, catching her splendid enthusiasm, became intensely participatory. Mr. Bryan, Manager of the Howe Memorial Press, supplying the appliances and books as needed, one experiment after another was carried out, checked and the results published. Those five years were a fertilizing period of new growth and understanding.

Meanwhile there had developed locally pupils' speech correction and a teachers' class in How to Study and Work Effectively; also, throughout the country, cumulative research, together with a lot of study papers, some books, and even *The Teachers Forum for Instructors of Blind Children*—a general fruiting traceable to Binet's tests for sifting out the defective children in the elementary schools of Paris.

THE TECHNIQUE OF PHYSICS INSTRUCTION FOR THE BLIND

WILLIAM C. HOOVER

According to available data there is a marked difference of opinion among superintendents and teachers in schools for the blind as to the relative value to their pupils of the more specialized science courses. In addition to the consideration of value there is always the question as to which science offers the least number of practical difficulties in successfully teaching the subject. In the high schools for the blind it is usually true that not more than one unit of science is taught in addition to the course in general science. Apparently most of the schools choose physics or biology and the choice is about evenly divided between the two. We shall not attempt to discuss the merits of each here but will consider some of the problems involved in the teaching of physics.

It is quite important that the physics teacher have a well defined set of objectives in mind all through the course. He should know what he aims to accomplish and whether the aims can actually be reached and how. He should be able to defend successfully each part of his course as to its actual worth to the pupil and to show that the course has been efficiently conducted with a maximum of accomplishment for the time expended. For these reasons careful planning is necessary in advance of the course and previous experience in teaching the subject to blind students is very valuable.

It has been pointed out by Cutsforth,[1] French,[2] Ritchie,[3] and others that there is a vast difference in persons with and without the power of visualization. Those persons who from early years have been incapable of the sensation of sight can have no visual imagery and no conception of light or color. Imagery to them will be in terms of muscular and tactual sensations and pictures. It is also true that to the average man the visual aspects are predominant in an image containing elements drawn from both sight and touch. Since books for the blind are usually planned and printed by seeing persons, it is not surprising that many pictures or drawings have been embossed in braille books that are entirely worthless to the blind in interpreting the objects they are supposed to represent.

New teachers in schools for the blind, gaining their first experience with blind children, may fail to recognize immediately the differences of their pupils in these respects, and the important connection of these differences to methods of instruction. The natural tendency is to take the attitude that the only handicap involved is the necessity of using braille and the inconvenience of not being able to see. While this is true of those who have lost their sight after attaining a considerable age, a large portion of the school population of any school for the blind is made up of pupils blind from congenital causes. It is very difficult for a seeing teacher to acquire the habit of disregarding the visual interpretation of objects when instructing these pupils and of making it easier for them to make their own interpretations in terms that they can understand as a result of real experience. The problem is further complicated in group work by the mixed nature of the groups in regard to vision and visual imagery.

While all of the educative process cannot be regarded as the acquiring of more or less isolated experiences, it is nevertheless the foundation upon which the remaining part of the process depends. If the basic experiences are not gained and the teaching activities consist entirely of reading and talking

[1] Thomas D. Cutsforth, *The Blind in School and Society*, (New York: D. Appleton and Co., 1932), pp. 48-70.

[2] R. S. French, *From Homer to Helen Keller*, (New York: American Foundation for the Blind, Inc., 1932), p. 185.

[3] J. M. Ritchie, *Concerning the Blind*, (Edinburgh: Oliver and Boyd, 1930), pp. 171-188.

about things with which the pupil has had no first-hand acquaintance, anything in the way of learning that is acquired will be a mere ability to repeat what has been told. That type of teaching is the cause of the tendency to verbalism on the part of many blind persons.

In the study of a science, such as physics, it is especially important to the blind student that his work should have a firm foundation of past and present experiences. Teachers must be especially careful not to allow visually acquired description to pass as sure learning to these students. They must not take too much for granted but should be suspicious of certain pupils' knowledge of things that are of necessity acquired only through vision. For those who have no power of visualization it is necessary to plan a course in physics in such a way that all the apparatus and materials for the necessary experimental work can be contacted by the pupil and that either he can do the experiment himself or is able to reconstruct the operations as described through his previous examination.

For convenience in discussing briefly the actual course, we may divide it into the five divisions of mechanics, heat, electricity, sound, and light. As the only textbook at present available in braille is the book by Millikan and Gale,[1] the general scheme of order and arrangement should follow that of this text. The first eight chapters may be considered as the chapters on mechanics, chapters nine and ten as dealing with heat, chapters eleven to fifteen with magnetism and electricity, chapters sixteen and seventeen with sound, and chapters eighteen to twenty with light.

It appears likely that from nine to fifteen weeks are usually devoted to mechanics. Most of the topics in the first eight chapters of the text are suitable for use and only a little can be omitted without loss to a complete course. One objection to the text as a whole is that it was written for the use of seeing students and so depends much upon references to pictures and diagrams that are either omitted in the braille edition or are not intelligible to the braille reader. It is obvious that reference to these missing and unintelligible figures is worthless and confusing. Substitutions must be provided by the instructor and the problem approached through a different medium. A large number of demonstrations should be done to compensate for the inability to make use of the pictured illustrations.

The course in physics is introduced with a study of measurement. Fundamental units of the English and metric systems are studied. The chapter closes with a consideration of density. In connection with the study of text materials the first experiment in the laboratory manual should be done, with each pupil having a chance to make the measurements. With a little help each pupil can measure table tops and other objects with a fair degree of accuracy. The teacher may notch the meter sticks if he desires. The volume of a block of wood may also be calculated. The method of finding percent of error should be learned. This experiment should be written on paper by each student and the paper placed between the backs of a notebook cover as the first of a series of experiments to be done during the year. It has been found necessary for the teacher to take the lead in formulating the wording of the experiments, as there is no braille manual and pupils are inexperienced in the proper way to write them. It is necessary to write these experiments as briefly as possible in order to save time. A concise, brief statement of what has been done, followed usually by recorded data is the ordinary procedure, As most of the experiments and demonstrations are performed by the teacher or under his guidance as a group activity and but one set of data is obtained, the experiments as written by the various students will be identical. The data are recorded without any attempt to

[1] Millikan, Gale and Davis, *Exercises in Laboratory Physics*, (Boston: Ginn and Co., 1925).

make a separate line out of each entry but are run continuously on a given section. Data for each new consecutive main division of the experiment, however, are begun on a new line. About twenty-four regular experiments are performed and reports written by each physics class at the Kansas school during the year. Fourteen [1] of these are on some phase of mechanics. This is in addition to a great number of shorter demonstrations, these demonstrations being made at any time the need arises. The short demonstrations are not written but rather they are usually done as a substitute for pictures and diagrams which seeing students get from the textbook.

Pupils should be taught how to weigh things on the platform and trip balances. This opportunity comes first in Experiment 2 on how to find volume. With the fingers locating the position of the pointer a fairly accurate reading is possible. If extremely accurate weighings are needed the teacher may assist to the extent of watching the pointer and reporting its position.

The experiments should precede the textbook reading rather than follow it. This gives an advance familiarity with the apparatus and with the technique and principles of the experiment. Insofar as practical it is best to let students examine the separate pieces of apparatus before it is set up. When a unit of work is being started it is a good plan to take a little time to assemble much of the apparatus to be used in that unit and put it on the tables for the pupils' inspection. Interest in the coming study will be quickened. Students are anxious to get a chance to use the articles they are handling.

Upon being questioned physics students at the Kansas school were unanimous in saying that the hardest subjects for them to understand of the first eight chapters were "Force and Motion" as studied in Chapter V and "Work and Mechanical Energy" in Chapter VIII. One of the difficulties for blind students in the "Force and Motion" chapter is to get a good understanding of composition and resolution of forces. The diagrams in the textbook are too complex to be of much value but the actual experimentation is done in the laboratory. If used together with the performance of the experiments, the diagrams in the book may sometimes be traced with the teacher's verbal aid, and the connection between the apparatus as it stands and the parallelogram as perceived in the book may possibly be understood. If the pictures in the book were confined to the simple figures, and attempts had not been made to draw such things as cars on the inclined plane and children riding and pulling a sled, they would not be so confusing to the student. The diagrams are more easily interpreted if the teacher explains the diagram and tells what it is expected to tell him and by verbal directions guides the pupil's hand movements along the lines.

The other chapter mentioned as difficult is also likely to be hard for seeing students. Levers, pulleys, and other simple machines are not easy to understand. A good teacher can do much to overcome both the difficulties due to blindness and those that are present for the seeing. The principal difference in teaching this material to the blind and to others is that blind students must first become thoroughly acquainted with the objects with which they are to deal through tactual inspection.

The second main division as previously outlined is that of heat. Heat is one general subject that within itself is not much more tangible to the blind than to the seeing. Since heat cannot be seen by anyone, but felt by all, that phase of its interpretation is on even ground for all. The difficulties for the blind as a group can then be thought of as being the limitations in the visual interpretation of the effects of heat on the objects affected. When heating causes the filament of a light bulb to glow, that type of evidence of heating is limited to

[1] Numbers 1, 2, 3, 5, 7, 8, 10, 11 (part 1), 12, 13, 14, 15, 16, 17.

those having the sense of sight. In a physics class the difficulties of the blind student, which are in addition to those encountered by every student, are technical and interpretative.

A number of experiments dealing with heat may be done in physics classes in schools for the blind. Those most adaptable are the ones dealing with the linear coefficient of expansion of metals, the coefficient of friction, the specific heat of metals, the heat of fusion of ice, cooling by evaporation, and the heat of condensation of steam. In finding the linear coefficient of expansion the teacher must make the readings before and after the steam has been let through the jacket. These readings of the thermometer and the setting of the screw at the end of the rod are the only things in the operation that a blind boy or girl could not do with a little training. The teacher can do the calculating with the aid of a pencil and relieve the students of much drudgery in complicated calculations. The student must understand the formula, how it is derived, and how the values are substituted in it. The object should be learning, understanding, and appreciation on the part of the student. There is no point, of course, in requiring each student to make long and involved multiplications and divisions at a great cost of time and effort when it can be so quickly done by the use of a pencil. The reading of thermometers by the teacher does not take away the reality so essential to understanding.

Magnetism, static electricity, and dynamic electricity have much of interest to blind children. The presence of magnetism or electricity is usually manifest to other senses than that of sight and interpretations can be made through these senses. In the experimental work there are difficulties of accessibility to measuring instruments, compasses, electroscopes, and the like. However, compasses can be made that are accessible and electroscopes can be taken apart for inspection. Ordinary voltmeters and ammeters must be read by the teacher and the readings taken on faith by the student. The interior of a galvanometer of the D'Arsonval type may be explored with the fingers and the movement of the coil noted when a current is applied. Circuits may be traced in most cases without difficulty. The method of using iron filings to show lines of force around a magnet is not very satisfactory but the idea may be given by description and making lines with the fingers.

The experiments usually done at the Kansas school are those on the voltaic cell, the chemical effects of an electric current, magnetic effects of a current, and circuits, electric bells, and telegraph sounders. Several others are usually done in part without taking the time to write a report. The most important thing for effective presentation is to have a sufficient amount of apparatus, and free use and accessibility of materials to the students.

After the activities of the classroom and laboratory have prepared the pupils for an application to larger machines of the principles learned, every opportunity at hand should be taken to gain experience with these larger machines. Motors and dynamos of commercial size should be inspected and not left to vague imagination or the interpretation of them as mere overgrown models of small machines.

In certain aspects of the phenomenon of sound, blind students of physics will show a familiarity much larger than average. There is a lopsidedness to the training which a large number have received in music and piano tuning that a study of sound from the standpoint of physics rather than music or tone helps to correct. Appreciation of the physical basis of their music is a valuable means of expansion of their viewpoint.

One conception often difficult to get over to a pupil is the difference in transverse and longitudinal wave motion. The usual visual illustration of sound waves as being like a series of waves started by a stone dropped in a pond cannot be very meaning-

ful to the blind who have never viewed this phenomenon. Also the up and down motion of water is complicated to those without means of getting a visual interpretation. The presentation of sound waves as condensations and rarefactions of the molecules of the medium through which the sound is to pass is the best original approach. The resonance tube experiment for open and closed pipes is a good application and can be interpreted both for the nature and length of the waves. In the illustrating of beats the best analogy is the playground swing.

It is possible for the blind to participate in all four of the experiments on sound as given in the manual. Even in the experiment on the speed of sound in air not more than two persons with sight are necessary and it would be possible to perform it with only one seeing person for the two groups. The experiment on finding the vibration number of a tuning fork can be performed as indicated but on thick paper. Later the tracings may be scratched into the paper deeply enough to be followed with the fingers. The method of obtaining the original vibration lines can be shown each pupil individually. The experiment to find the wave length of a note of a tuning fork can be readily followed as performed, once the apparatus has been examined. Students can assist in the performance. The experiment on the laws of vibrating strings may be done with little or no assistance from the teacher.

According to the hypothesis that the absence of the power of visualization would make any attempt to describe light or visual pictures a useless thing, there is no need to force information on the subject of light upon these persons. However, there is the possibility of value in having gained certain information about the ways in which light enables other people to respond to its influence and from this the indirect way in which the blind individual himself is affected. This sort of knowledge of light will be gained to a certain extent in everyday experiences, but may be amplified and clarified by conscious instruction toward these ends. In the case of the physics classes in schools where visual imagery and vision are present in some pupils and absent in others it would seem that instruction must be on more than one basis in respect to methods and objectives. If the subject is taught in the same way as for the seeing there is a good chance for the student without experience in light to acquire some information which he can repeat but which means nothing in terms of experience.

Unless there are pupils in the class who have an appreciable amount of vision, laboratory experiments as ordinarily done are not profitable. Sometimes it is best to set up the apparatus in order to make clear the principle which can and should be known to all. For instance, if it is desired to know that the intensity of light varies inversely as the square of the distance, it can at least be shown to the blind how Rumford's photometer is arranged to demonstrate the fact.

Certain information about the power of convex and concave lenses to bend light rays should be valuable to all pupils. The totally blind get the phenomena to some extent in the feeling of heat. Reflection and diffusion of light may have an analogy in the act of throwing a ball against a wall. If the wall is smooth the angle at which it will rebound may be predicted. If the wall is rough the ball will rebound in one of a number of directions. It may seem strange that many blind cannot readily answer the question if asked in what direction a ball will be deflected if thrown northwest against the smooth north wall of the room. However, such devices offer a means for analogies.

There are a number of types of tests suitable for use with physics classes the same as for other subjects. The essay or discussion type, the true-false, the multiple choice, the problem type and others can be used at the discretion of the teacher. There has been no standardization of physics tests especially for use of the blind. Only those

standardized for normally seeing students are available, as for example, the Michigan Instructional Tests in Physics. The writer has used a part of this battery of tests with his last two physics classes at the Kansas school and has found them valuable. According to the standards set up by the printed tests, the class medians were consistently below average each year. This is to be expected, as most of the mathematical calculations were done mentally and hurriedly. However, the comparisons are interesting to make and the standard is something toward which to work.

One objection to the use of these tests is the great amount of time used in giving so many. The tests are very thorough and perhaps cover the subject more completely than the necessary time justifies. This objection was partly overcome here by giving every other question, as for instance, the odd numbers. This plan also gives a chance to eliminate the type of problem that depends upon a figure on the test sheet, but not available to the student.

Notwithstanding the inevitable difficulties that challenge the science teacher, is it not better to do the things that can be done and to be thankful for even that much of an opportunity to help the student gain for himself that which he so evidently needs? A year of physics needs not be a drudgery but a chance for joyful revelation and interesting discoveries for the student.

(*Continued from Page* 71)

in their vocational studies. However, this Section does remind us that the blind worker who knows nothing but the techniques of his particular trade, and who is interested in nothing else, is at a disadvantage.

The chapters in Section five, on Health and Physical Education are enhanced in value by an excellent and detailed report in Appendix 2 in which are given the results of a thorough physical and orthopedic survey made in ten cooperating schools. This survey not only reports its findings but gives definite suggestions for improving the work of the individual schools—suggestions which, from this distance, sound entirely practicable.

The last Section deals with miscellaneous topics such as The Blind Child in Schools for the Seeing, Co-Education, and Secondary and University Education. The paragraphs relating to braille classes in the public schools will not be quite satisfying to readers in this country who feel that such classes have proved their worth here. However, the school situations in the United States and in England are not entirely comparable and it may be that such classes cannot be provided for as well there.

The Education of the Blind has so many valuable suggestions to offer teachers of the visually-handicapped everywhere that the lack of a summarizing section is to be regretted. Unless the book is read straight through, from cover to cover, much of what the authors have to give will be overlooked. Also, even after the book has been thoroughly digested it would be helpful for the student if the numerous recommendations and criticisms were summarized so that frequent reference could be made to them.

A TALK ON AN HERB DINNER

Evelyn Crossman

Editor's Note: The following article was written by a member of the 12th grade of Perkins Institution. It is printed not only for its value as a student contribution but also for its worth in suggesting a practical project in combining nature study and home economics. It was given as a student chapel talk at Perkins.

Before I tell you about the herb dinner, I will give you an account of the herb garden. In 1935 Perkins Institution received a gift of money from Mrs. Herbert G. Lowe. She expressed the desire of having this money spent for some horticultural develop-

ment here at school. After some consideration, it was decided that an herb garden would perhaps prove most interesting.

As you all probably know, the herb garden is at the further end of the Girl's Close. Through the center of the garden is a stone path. From this path and the front of the garden, the girls and whoever may walk in the garden for the enjoyment of it, can stoop down and learn to identify the plants by their foliage and fragrance. All the plants are labeled with braille tags.

The planting of herb gardens is, at the present time, a very popular hobby among those who have the money and space to indulge in this type of gardening. This has not always been so, however. During the Fifteenth Century the herb garden played an important part in every household. Herbs at that time were used for their medicinal properties. Even today we have some medicines that are made from herbs: Digitalis, the medicine used for heart trouble; and Belladonna, which we are all perhaps more familiar with since eye specialists use it for dilating pupils.

Since it was harvest time for the herbs, certain people thought it would be nice to have an herb dinner. Now, to many of you that may sound very unappetizing. You must remember, however, that herbs alone are not a food, but that they are used to season other foods.

The first course of our dinner the other evening was an herb bouillon. Really, it was very good. Next we had crowned roast of lamb with sage stuffing, parsley potatoes, and egg plant a la creole. Now, let me explain this dish to you—since yesterday when I was talking over the menu in one of my classes, those present seemed to be very much in doubt as to what egg plant a la creole is. It is egg plant cut into cubes and cooked with tomato, onion, bayleaf, and other herbs. Then we had a salad of sweet herbs, and poppy-seed rolls. The rose geranium leaves in the finger bowls that we used had a very pungent odor. For our dessert we had peppermint ice cream and caraway cookies. The last course consisted of demitasse, sage cheese, and crackers. Perhaps you would be interested to know that during the course of the dinner eighteen different herbs were used. Here is a list of them: Parsley, thyme, savory, basil, hyssop, sage, rosemary, bayleaf, chives, sweet marjoram, sweet fennel, poppy seeds, caraway, rose geranium, violet, peppermint, and spearmint. All the herbs, with the exception of bayleaf, were grown here in our herb garden.

THE TEACHERS FORUM
for
Instructors of Blind Children

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RESEARCH ACTIVITIES IN A SCHOOL FOR THE BLIND

W. G. SCARBERRY

Before entering upon a discussion of this subject we should attempt to define "Research." Perhaps one of the best and most widely accepted statements regarding research was made by W. W. Campbell in an address, "Universities and the Truth," published in *School and Society* September 6, 1924. We quote: "There exists in the public mind much uncertainty as to the nature and purpose of research. The problem of research is the problem of searching for the truth—of searching for what is 'so,' as the man in the street would probably express it. It is not a search for those fragments of truth, which have already been found and are now described in books, more or less

scarce, or obscure, but a search for existing truth, which has not yet been found by anybody."

Without doubt the residential school provides a most fertile field for scientific investigation. The Ohio School, situated in Columbus near the Ohio State University, which cooperates splendidly in rendering needed assistance, within the past few years has been pursuing subjects of vital importance to the educational work for the blind. The question of the ability of the teachers to carry out a research problem might be raised at this point. Most emphatically the staff members are both capable and willing —in fact, it has been our experience that with mere suggestion and meager outline on the part of the superintendent the staff members have produced amazingly complete and helpful studies. During the school year 1935-36 our staff was divided into eight committees to study the Cardinal Principles of Education as they apply and should apply to training in residential schools. Through the research library in our own school and through that of the State University, there were produced some very outstanding adaptations of these principles which may be used as a sound educational philosophy for any school for the blind. The findings of the staff committee on Citizenship are now being used as an instructional outline in this subject; from a combination of the findings of several other committees there has been evolved a "personal traits" card which is now in use. The entire report of staff studies for 1935-36 comprises 160 mimeographed pages and is available to any one interested. A similar study and investigation plan is being followed this year 1936-37; for example, the Committee on Organizations reported its findings at a general staff meeting followed by critical discussion. A few days later the findings of the committee, plus changes necessitated by the discussion, were filed as the final committee report.

Graduate students in our University have become interested in our work and have been assigned subjects to develop into Masters' theses under the direction of the superintendent. Some theses recently so developed are: "Eugenic Aspects of Hereditary Blindness," "Physical Education in Residential Schools," and "Regimen and Curricula in Schools for Blind." Such cooperation with our University not only produces excellent and helpful studies but interests the college, college students, and the public generally in our work. Space does not permit our discussing any of these theses but should any one be interested copies may be secured from the school.

In conclusion, the residential school presents an ideal research set-up; the school itself is a laboratory and, staffed with capable and interested teachers, provides an unusual opportunity for producing scientific studies helpful to the staff, the pupils, and to the work generally.

Our Contributors

Mr. Carl Engler has been instructor of typewriting in the Wisconsin School for the Blind for a number of years. His present article is a companion article to the one printed in the March, 1935 issue of *The Teachers Forum.*

Dr. Kathryn E. Maxfield is Director of the Arthur Sunshine Home and Nursery School for the Blind. Because of her wide experience in work for the blind, she is eminently fitted to review the book, *The Education of the Blind.*

Mr. William C. Hoover is Principal of the Kansas State School for the Blind. Much of the material in his present article is based on a thesis on the same subject prepared by Mr. Hoover to meet the requirements of a Master's degree.

Miss Evelyn Crossman was a student in the twelfth grade at Perkins Institute and Massachusetts School for the Blind during the school year 1935-36.

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INSTRUCTORS OF BLIND CHILDREN

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THE MEASUREMENT OF EDUCATIONAL ACHIEVEMENT IN SCHOOLS FOR THE BLIND

SAMUEL P. HAYES, Ph. D.

This is an age of surveys and investigations. The millionaire purchasing a racing stable and the business man absorbing a factory unit are not satisfied with someone's assurance that they are getting a wonderful bargain, any more than the insurance company is willing to accept the owner's gross estimate of his loss by fire or water. All seek objective evidence—the testimony of scientific measurement—upon the values involved. A visitor from a foreign country who plans to establish a school for the blind may enjoy a trip through one of our institutions, but he will value most the actual figures showing capital investment, staff personnel, equipment, enrollment, cost per pupil, etc. Facts, rather than estimates, are equally valuable to the educational staff of the school itself. The principal teacher should know how his grades compare with similar grades in other schools for the blind and in schools for the seeing, and try to remedy the difficulty wherever he discovers a weak point. Teachers may determine by the use of objective tests the effect of new classroom methods or devices and locate individual pupils needing special attention. The pupils themselves may be motivated to renewed effort through progress charts in which their attainments are compared with objective norms.

It was the realization of these needs which prompted us early in our research program to publish a manual for the guidance of teachers of the blind in giving objective tests of general intelligence and of achievement in most of the regular school subjects. The limited issue of this manual was soon exhausted and later adaptations of tests covered only a few school subjects. It is now possible to make an up-to-date survey of most of the subjects taught in a school for the blind by means of the Stanford Achievement tests. These tests have a high reliability, since they have been standardized upon a large number of children in different parts of the country. They are provided in five equivalent forms so that the children can be measured in successive years without loss of accuracy.

A preliminary tryout by Dr. Kathryn E. Maxfield at Perkins Institution in 1933-34 with six of the ten tests—dictation, geography, language usage, literature, physiology and hygiene, history and civics—showed the value of this series of measurements. Acting upon the theory that the mechanism of reading test material by touch was an unfair handicap for the blind, all these tests were at first given orally. But this method made such extreme demands upon memory and was so time-consuming and fatiguing—some pupils even blistering their fingers with the long-continued writing — that Perkins Institution began putting the tests into braille and offering them for sale to other schools. During the last school year (1935-36) the whole series of tests was given at Perkins Institution in the fall, and at the New York Institute for the Education of the Blind in the spring. On the basis of a very satisfactory experience with the tests, the following directions were prepared in collaboration with Mr. Francis M. Andrews at Perkins Institution, Mr. Harold Wright at the New York Institute, and Miss Ruth Sargent at the Pennsylvania Institution for the Instruction of the Blind, and the tests were given again this year at Perkins Institution and the New York Institute.

DIRECTIONS FOR GIVING THE NEW STANFORD ACHIEVEMENT TESTS (THIRD REVISION) ADAPTED FOR USE WITH THE BLIND

By S. P. HAYES, Ph.D., et al.

(Identical for all five forms. To be followed *verbatim*. It is strongly recommended that all testers *read* the parts printed in quotes to ensure uniform procedure.)

"Today we are starting a series of interesting tests which will give you a chance to show how much you have learned. I will now hand you each a copy of the first test pamphlet, but please do not look into it until I tell you to do so. Get out your braille slates, put in a paper, and write your name at the top of the sheet. Then please fold your hands and keep them folded until I give you the signal to start."

Place one pamphlet on each desk and say: "Now listen carefully and do just what I tell you to do. Do not begin until I say GO. The very second I say STOP, you must stop work and hold up your stylus. After we have begun you *must not* ask any questions. If you drop your stylus, lose your place, or need more paper, raise your hand and I will help you. Do your best and do not pay any attention to what anyone else is doing."

TEST I. READING: PARAGRAPH MEANING.

"The first test contains a number of paragraphs, in each of which there is at least one word missing. Where these words should be you will find a line of dots. You are to read a paragraph through and decide what word may be needed to complete the meaning of the paragraph. Look at the beginning of the test and read the words at the top of the page." See that each pupil has the place. "It says (read slowly): 'Dick and Tom were playing ball in the field. Dick was throwing the ball and . . . . (pause) was trying to catch the ball.' Who was trying to catch the ball?" Encourage pupils to answer aloud. As soon as the correct answer is given, say: "Yes, Tom was trying to catch it. You must write Tom on the first line under your heading." Pause until the word is written.

"Wherever you see a line of dots it means a word has been left out. Begin with number 1, read each paragraph carefully, and write on your slates the *number* of the paragraph and *just one word* for each line of dots you come to in the paragraph. In each paragraph there is at least one word missing; some paragraphs have as many as three words missing. Do not write out the *whole paragraph*. Write *just one word* for each line of dots, arranging your answers in column form on your paper, taking a new line for each paragraph. If you cannot think of the right word, or words, omit a line and go on to the next paragraph. When you have finished the first page of the test, go right on to the next and keep on working till I tell you to stop. Are there any questions? Begin with paragraph I. Ready, GO." Record the exact time of beginning the test. If the children ask permission to block out mistakes, allow them to do so. See that they do not stop with the first page. Try to keep all the pupils at work until time is called.

At the end of *40 minutes* say: "STOP. I will now collect your papers." Collect the papers and pamphlets, writing each pupil's name on the *pamphlet he has been using*. Before continuing the test the next day, note the last word written by each pupil, and mark the paragraph corresponding to it in his pamphlet.

Complete the test the following day if possible, allowing another *35 minutes'* working time. After sheets have been put in the slates, names recorded, and the pamphlets returned to their former users, say: "Now I will help you to start where you left off yesterday. But when you have found your place, all wait for the signal before reading ahead." See that everyone has the right place and is ready to begin. Then say: "Ready, GO," and record the exact time of beginning the test. At the end of *35 minutes* say: "All STOP," and collect the papers and pamphlets.

TEST 2. READING: WORD MEANING.

"Today we are to use another test to show how much you have learned. Please do not look into the test pamphlet until I tell you to do so. Keep your hands folded till I give you the signal to start work. For this test you will not need a slate, but will draw lines through certain words on the test

pages with a pencil which I will give you." Pass pamphlets and pencils and then say: "In this test you will find a series of sentences, each of which needs one word to make it true, and following each sentence you will find a list of five words from which you are to select the correct one. When you have decided which of these five words will best finish a sentence, you are to draw a line through that word with your pencil. Before beginning the test we will try a couple of sample sentences to show you just what you are to do.

"Open your pamphlets to the page which starts with the sample sentence: 'A rose is a..... box *flower* home month river.' Of course a rose is a flower, so take your pencils and draw a line through the word *flower*. Look at the next sentence. 'A roof is found on a..... book person rock *house* word.' Of course a roof is found on a house, so that is the correct word; draw a line through the word *house*.

"Now we are ready to begin the test. Do not start till I say GO, and the very second I say STOP, you must stop and fold your hands. After we have begun, you must not ask questions. If you drop your pencil, or lose your place, raise your hand and I will help you. If you come to some sentence you cannot do, skip it and go on to the next. Do your very best and do not pay any attention to what anyone else is doing. Remember that in this test you are to draw a line with your pencil through the word that makes a sentence true, just as in the samples we have worked over together. When you have finished with the first page go right on to the next. Do as many sentences as you can in the time given you. Are there any questions? . . . . Ready, GO."

Record the exact time of starting. At the end of *25 minutes* say: "All STOP for a minute, as I want to mark your pamphlets to show how far you have gone. Please sit with your hands folded." Go around with a *red* pencil and encircle the last word crossed out. This will give you two scores, one at *25 minutes* and one at *35 minutes*, for later study. Say: "Now all find the last sentence you worked on and then wait for the signal to go ahead." See that all are in the right place and then say: "Ready, GO." At the end of another *10 minutes*, say: "All STOP and fold your hands." Then collect the pamphlets, making sure that each child's name is on the outside.

Test 3. Dictation Exercise.

"Put your paper in your braille slate and write just what I tell you to write. (If pupils can use typewriters for this test, time will be saved in scoring their work.) On the first line put your name.

"The test today is a dictation test. I am going to read some words for you to write. Listen carefully and be sure to put down every word I read. Begin each sentence on a new line. The first sentence is ....." From the printed test sheet read the first sentence intended for the grade you are testing. Read the entire sentence each time. Do not break it up. A sentence may be reread once, or oftener, if necessary. If the children request the repetition of a sentence that has been passed, say: "Let that sentence go. Write this one." This may prevent many distracting requests for sentences done some time before. The tester should give all words clearly, in a natural voice, being careful not to confuse the pupils by unfamiliar pronunciations. If several teachers are to co-operate in giving this test, they should go over the words together and decide upon the pronunciations to be used, giving alternative pronunciations when the children do not seem to recognize a word. When the harder sentences are reached, it is well to encourage the children with such expressions as, "Do the very best you can, even if you are not able to write *all* the words." At no time are the pupils to be told that this is a spelling test.

Test 4. Language Usage.

"Today we are to have a test to show how well you can use language. Please do not look into the test pamphlet until I tell you

to do so. Keep your hands folded until I give you the signal to start. For this test you will not need a slate but will draw lines through certain words on the test pages with a pencil I will give you." Pass the pamphlets and the pencils and then say: "Turn to Test 4, and notice the sample sentence at the top of the page. It says: 'Apples is — are good.'" See that everyone has the right place. "Now which is the right word, *is* or *are*?" Encourage the pupils to reply. "Yes, the word *are* is correct. So take your pencil and draw a line through the word *are*.

"Read the next sample sentence. It says: 'He told — telled me.' Which is the right word, *told* or *telled*?" Pause for the answer. "Yes, so draw a line through the word *told*. Then fold your hands.

"There are several pages full of such sentences, with words in parentheses from which you are to choose. You must do as many as you can, starting when I give you the signal. You are to read each sentence carefully and draw a line through the word or phrase that makes the better sentence. If you come to a sentence you cannot do, skip it and go right on to the next. If you drop your pencil or lose your place, raise your hand and I will help you. After we have begun, you must not ask any questions. Are there any questions now? Ready, GO." Record the exact time of starting.

At the end of *25 minutes* say: "All STOP for a minute, as I want to mark your pamphlets to show how far you have gone. Please sit with your hands folded." Go around with a *red* pencil and encircle the last word crossed out. Then say: "Now all find the last sentence you worked on and then wait for the signal to go ahead." See that everyone has the right place and then say: "Ready, GO." Record the time. At the end of another *10 minutes* say: "All STOP and fold your hands." Then collect the pamphlets, making sure that the child's name is on the outside.

Test 5. Literature.

"Today we are to have a test to show how much you know about literature. Please do not look into the test pamphlet until I tell you to do so. Keep your hands folded until I give you the signal to start. For this test you will not need a slate, but will draw lines through certain words on the test pages with a pencil I will give you." Pass the pamphlets and the pencils and then say: "Turn to Test 5 and notice the sample sentence at the top of the page. It says: 'A giant is a big— dog man boat.' A giant is a big *man,* so take your pencil and draw a line through the word *man*. Look at the second sentence. It says: 'The Bible is the name of a — place country book.' *Book* is the word that makes the sentence true, so draw a line through the word *book*.

"There are several pages full of such sentences, with lists of words from which you are to choose. You must do as many as you can, starting when I give you the signal. You are to read each sentence carefully and draw a line through the word or phrase that makes the best sentence. If you come to a sentence you cannot do, skip it and go right on to the next. If you drop your pencil or lose your place, raise your hand and I will help you. After we have begun, you must not ask any questions. Are there any questions now? Ready, GO." Record the exact time of starting.

At the end of *25 minutes* say: "All STOP for a minute, as I want to mark your pamphlets to show how far you have gone. Please sit with your hands folded." Go around with a *red* pencil and encircle the last word crossed out. Then say: "Now all find the last sentence you worked on and then wait for the signal to go ahead." See that everyone has the right place and then say: "Ready, GO." Record the exact time of starting. At the end of another *10 minutes* say: "All STOP and fold your hands." Then collect the pamphlets, making sure that each child's name is on the outside of his pamphlet.

Test 6. History and Civics.

"Today we are to have a test to show how

much you know about history and civics. Please do not look into the test pamphlet until I give you the signal to start. For this test you will not need a slate, but will draw lines through certain words on the test pages with a pencil I will give you." Pass the pamphlets and the pencils and then say: "This is another test like the one on literature. There are several pages full of sentences, with lists of words from which you are to choose. You are to read each sentence carefully and draw a line through the word or phrase that makes the best sentence. You must do as many as you can, starting when I give you the signal. If you come to a sentence you cannot do, skip it and go right on to the next. If you drop your pencil or lose your place, raise your hand and I will help you. After we have begun, you must not ask any questions. Are there any questions now? Ready, GO." Record the exact time of starting.

At the end of *25 minutes* say: "All STOP for a minute, as I want to mark your pamphlets to show how far you have gone. Please sit with your hands folded." Go around with a *red* pencil and encircle the last word crossed out. Then say: "Now all find the last sentence you worked on and then wait for the signal to go ahead." See that everyone has the right place and then say: "Ready, GO." Record the time. At the end of another *10 minutes* say: "All STOP and fold your hands." Then collect the pamphlets, making sure that each child's name is on the outside of his pamphlet.

TEST 7. GEOGRAPHY.

"Today we are to have a test to show how much you know about geography." Then read the directions exactly as given for Test 6, using the same time limits, *25* and *35 minutes.*

TEST 8. PHYSIOLOGY AND HYGIENE.

"Today we are to have a test to show how much you know about physiology and hygiene." Then read the directions exactly as given for Test 6, using the same time limits, *25* and *35 minutes.*

TEST 9. ARITHMETIC REASONING.

"Today we are to have a test to show how well you can do problems in arithmetic. Please do not look into the test pamphlet until I tell you to do so. You will find a series of problems which you are to solve. You will write the *number* of the problem and the *answer* on your slates. You can easily do the first problems in your head, but you may begin using your arithmetic slates as soon as you like. On your braille slates use a new line for each problem, making two columns on the paper, one down the side, and one down the middle. If you come to a problem you cannot do, write the number of the problem, leave a blank space, and go on to the next line. Does everyone understand?

"If you drop your stylus, lose your place, or need more paper, raise your hand and I will help you. Ready, GO." Record the exact time of starting.

At the end of *40 minutes* say: "All STOP for a minute as I want to mark your pamphlets to show how far you have gone. Please sit with your hands folded." Go around with a *red* pencil and encircle the number of the last problem completed. Then say: "Now you may go on working with the problems until I give you the signal to stop." At the end of *60 minutes* say: "All STOP and fold your hands." Collect the pamphlets and the braille sheets, making sure that each child's name is written on both.

TEST 10. ARITHMETIC COMPUTATION.

"Today we are to have a test to show how well you can do examples in arithmetic. Please do not look into the test pamphlet until I tell you to do so. You will find a series of examples printed across the page with the number of each example before it in a parenthesis. On each example you will be informed what to do—whether to add, subtract, multiply, etc. You can easily do the first examples in your head, but you may begin using your arithmetic slates as soon as you like. After solving an example write the number of the example and your

answer on your braille slates, taking a new line for each example and arranging the answers in two columns on the paper, one down one side and one down the middle. If you come to an example you cannot do, write the number of the example, leave a blank space and go on to the next line. Does everyone understand?" Allow time for questions.

"If you drop your stylus, lose your place, or need more paper, raise your hand and I will help you. Ready, GO." Record the exact time of starting.

At the end of *40 minutes* say: "STOP, I will now collect your papers." Collect the papers and pamphlets, writing each pupil's name on the pamphlet he has been using. Before continuing the test the next day, note the last example he has attempted and mark that example in his pamphlet.

Complete the test the following day allowing another *35 minutes'* working time unless the pupils have omitted or failed so many examples in the first session that there is little probability of their succeeding with these more difficult examples. After sheets have been put in the slates, names recorded, and the pamphlets returned to their former users, say: "Now I will help you to start where you left off yesterday. But when you have found your place, all wait for the signal before beginning to work." See that everyone has the right place and is ready to begin. Then say: "Ready, GO," and record the exact time. At the end of *35 minutes* say: "All STOP," and collect the papers and pamphlets.

Discussion and Interpretation

Comparison with the tests as published for use with the seeing will make evident the basic changes found necessary in adapting these tests for use with the blind: 1) greater detail in preliminary instructions, and 2) an increase of time allowance to meet the 3 - 1 differential indicated by Caldwell's study[1] of an earlier form of these tests. For experts in testing, some of the details may seem unnecessary, but for teachers who only occasionally use objective tests, specific instructions, to be exactly followed, give the only assurance of standard procedure. The increase in time limits, while making it more likely that these tests will measure "power" rather than speed, as intended by their authors, produced certain difficulties which are most marked in Tests 1 and 10. As planned for the seeing, Test 1, requiring 25 minutes, and Test 2, requiring 10 minutes, could both be given at one sitting, during an ordinary class period; and three further sittings were enough to complete the whole series of tests. Allowing three times as long an interval for the blind would mean twelve sittings for the whole series and more than a single class period apiece for Tests 1, 9, and 10. As the items of each test are arranged from easy to difficult, it has been proposed that we later print alternate test items in Tests 1, 9, and 10, and thus reduce the time to one-half of three times the seeing rates. But as now printed in braille, it seems best to divide Tests 1 and 10 into two sittings, 40 minutes for the first and 35 minutes for the second, and to risk the fatigue of one long session of 60 minutes for Test 9. In Test 2 and Tests 4-8 pupils are to be interrupted after 25 minutes of work, so their progress at that time may be recorded. After this they are allowed another ten minutes. This will give us two scores from which we may be able to determine optimal time limits, when enough schools have reported to us their results.

Even in their present form the tests show a very high reliability. A comparison of the results, obtained by giving alternative forms of the whole series the last two years to all the children in grades four through nine in Perkins Institution and in the New York Institute, shows a correlation by the rank difference method of +.94 in one school and of +.97 in the other. If the other forms of the test give similar correlations, as we hope they may, we shall have an excellent instru-

[1] Floyd F. Caldwell, "A Comparison of Blind and Seeing Children in Certain Educational Abilities." Pub. at American Foundation for the Blind, 1932.

ment for measuring the effects of many educational factors such as changes in methods of teaching, the influence of different teachers, the relation of intelligence or amount of vision to school progress, etc. Moreover the test pamphlets serve as valuable review material, as they make it possible to give the children special training in their weak points. Since there are five forms of the tests there is little likelihood that any memory vestiges of a first trial will be left to affect the results when a form is used again five years later.

For administering these tests, a school should purchase from the Personnel Department at Perkins Institution the following materials:

	Cost for single copy	Cost for testing 100 pupils
I. Inkprint materials		
Directions for administering	5c	$ .05
Key and directions for scoring	5c	.05
Advanced Examination pamphlet for grades 4-9, in the same form as the braille ordered (V, W, X, Y, Z)	8c	.08
Class record and analysis charts (two copies for each grade)	3c	.36
Educational profile charts (One for each pupil tested)	2c	1.40
II. Braille material		
Braille test pamphlets		
Whole series of 10 tests	50c	50.00
Any single test	10c	
(One needed for each pupil)		
Total cost for testing 100 pupils completely		$51.94
(About one-half as much for 50 pupils)		

When preparing to give a test the teacher should be provided with a dependable watch indicating seconds so the timing may be accurate, a red pencil, and a copy of the test directions; for each pupil she should have one test pamphlet and one black pencil.

After conducting a test the teacher will correct the student work, using the printed key and then transmute the "raw scores" into "equated scores" by means of the tables at the bottom of the inkprint test pamphlets of the same form used in braille. These scores have been so calculated that grade and age norms are the same for all the tests, i.e., a 10 year old child should obtain a score of 50 on each of the ten tests, and a child beginning the seventh grade a score of 82 on each of the ten tests. Next a profile chart should be made out for each child, which will indicate his individual strengths and weaknesses in the different subjects and may be compared directly with the class marks his teacher has given him in the same subjects, and with his I.Q. From the same profile chart the teacher may read off the child's *educational age,* as indicated by his total score, and calculate his *educational quotient*: that is, the educational age divided by the actual age. This should be modified for the blind by subtracting at least two years from his actual age to balance the educational retardation due to blindness. *Subject quotients* may be similarly calculated for the eight separate subjects by dividing a child's subject age by his actual age less two years. His *accomplishment ratio* also may be calculated by dividing the child's educational quotient by his intelligence quotient, though there are serious questions concerning the validity of this ratio. A full discussion of all these points will be found in the inkprint directions for administering.

For the study of a grade, the pupils should be listed in order from highest to lowest in terms of total score upon the *class record sheet,* and then entered by number on the *class analysis chart.* This will show in graphic and easily comprehensible form, how the grade as a whole compares with the norms in each subject tested, and indicate in which subjects greater attention should be given to the grade as a whole or to particular students. Principal teachers will

discover which teachers are especially successful with particular subjects, and may gain hints for redistribution of classes on the departmental system. A series of charts showing superior attainments in several grades will give just cause for congratulation; inferior results form a challenge to both teachers and principal. In a seventh grade tested, for example, we find superior attainment in language usage and geography (the class median being about two years above the norm), inferior attainment in physiology and hygiene and in arithmetic computation, and about normal attainment in the other tests. In I.Q. these pupils range from 130 to 94, with a single pupil at 69, the median for the class being 112 I.Q.; in mental age they range from 18:6 to 12:11 with a single pupil at 11:1, the median of the class being 15:8. In chronological age they are only about one year older than seeing children of the seventh grade, so we have a class of considerable ability, and we should expect good work from them. The low scores in arithmetic computation are easily explained: not enough time was allowed, and they were asked to do, without arithmetic slates, a series of examples which the seeing would not be expected to do "in their heads." The low scores in physiology and hygiene would seem to indicate that not enough emphasis had been put upon these subjects. In the sixth grade of the same school, with somewhat lower median I.Q., we find language usage and arithmetic computation the low subjects. The latter is to be explained again by the nature of the test; the former must be studied further. The chart shows that 6 of the 8 low scores come from pupils with I.Q.'s below 100, so the fault may not be entirely due to the teaching; but since these children practically all succeed better in the other tests, a change of emphasis and methods in the teaching of language usage may reasonably be expected to remedy the weakness. The use of the same tests in an alternative form this year may be expected to answer this question.

Interschool comparisons in spelling (dictation test) showed one school up to standard in the 4th, 5th, and 6th grades only, another school up to standard in the 7th, 8th, and 9th grades only, and a third school above the seeing standards in *all* the grades. Apparently it is not necessary for the blind to be poor spellers!

Illuminating subject analyses can be made through a comparison of individual results in any of the ten tests with the school marks given by teachers. As an example let us consider Table I following, which

TABLE I

Correlation of scores in the Dictation Test, with teachers' marks in spelling, in a fifth grade

I Test Scores	II Names	III Rank in test	IV Teacher's mark in spelling	V Rank in marks	VI Difference in ranks	VII Difference squared
77	Mary	1	A—	1	1	1
64	Jane	2	B	4½	2½	6.25
62	Clarissa	3	B+	2½	½	.25
58	John	4	B+	2½	1½	2.25
53	Helen	5	D	12	7	49
51	Elizabeth	6½	C—	9	2½	6.25
51	William	6½	B	4½	2	4
49	Ruth	8	C—	9	1	1
48	Carl	9	B—	6½	2½	6.25
40	Janice	10	C—	9	1	1
37	Robert	11	B—	6½	4½	20.25
36	Henry	12	D	12	0	—
32	Joseph	13	D	12	1	1
50.6	Average				Sum	98.50
51	Median					

$$\text{Correlation rho} = 1 - \frac{6 \times 98.50}{13\ (13^2 - 1)} = 1 - .27 = +.73$$

shows a study of spelling ability in a fifth grade.

Column I gives the scores obtained in the Dictation Test by 13 pupils to whom fictitious names are given in Column II. The average score is 50.6 and the median 51, the girls being considerably better than the boys. Column III gives the rank from best to poorest, an intermediate rank of 6½ being given to the two pupils who obtained the same score of 51. Column IV gives the school marks obtained in spelling, and Column V gives the rank in terms of school marks, A— being the highest, receiving a rank of 1, the two pupils with B+ receiving 2½, an intermediate rank between 2 and 3, etc. Column VI gives the numerical difference in ranks, regardless of sign, which is squared in Column VII. The sum of Column VII multiplied by 6 and used in the rank difference correlation formula, $\text{rho} = 1 - \frac{6 \text{ sum of } D^2}{n(n^2-1)}$ (where n = the number of pupils) gives a correlation of +.73, which would be considered a very satisfactory relationship. If Helen who tested 5th had not been marked so low in spelling by her teacher and if Robert who tested 11th had not been marked so high, our correlation would have been much larger. In this school the correlations in spelling obtained by this method were as follows: 4th grade, +.78; 5th grade, +.73; 6th grade, +.85; 7th grade, +.71; 8th grade, +.44; 9th grade, +.75. In all but the 8th grade these correlations are so high that we must conclude that the single measurement of spelling by this half hour test in the Stanford Achievement series is about as reliable as the opinion of a teacher who has worked with a grade for half a year—these tests having been conducted in February—and that we would be justified in recommending that the standard dictation test in one of its forms be given each year in place of any other final examination in spelling. Similar recommendations may be made for the other tests, if equally high correlations are discovered. The low correlation for spelling in grade 8 was caused by wide variations in rank for 6 of the 18 children tested; two of these were children of low I.Q. whom the teachers marked considerably lower than the ranks in their tests indicate that they are entitled to, while one other was a bright child whom the teacher ranked much higher than seems justified by the test—all illustrating a common type of error in judgment now attributed to the "halo of general merit."

NORMS AND STANDARDS.

After a careful study of tables and charts made from the results of the tests in Perkins Institution and the New York Institute, where two forms of the Stanford Achievement tests have been used in succeeding years, it seems safe to propose that the printed norms for the seeing be used as standards for the blind in the first nine tests. Test 10 (Arithmetic Computation) introduces certain difficulties, and appears to demand abilities which we cannot reasonably expect from the average blind pupil, even when a liberal time allowance is granted. For the present we would suggest that in this test the seeing norms for the next lower grade be used as the standard for each grade in schools for the blind.

These seeing norms may be found on the Educational Profile Chart. In the column headed School Grade, locate the number of the grade tested and take the corresponding number on the horizontal line to the left in the column headed Total Score. This will be the norm for all tests given in September; for tests given in later months go up the School Grade column one-tenth of a grade for each additional month: for instance, the norm for a sixth grade tested in September is 74, for October, 75, for December, 77, etc.

It is our hope that a considerable number of schools will begin the use of these tests with the help of the accompanying directions. If any details are not clear the writer will be pleased to offer any assistance in his power. In return he hopes to have reports of results so a wider study of the tests may be made and improvements introduced.

A BLIND GIRL SCOUT AT CAMP ANDREE

MRS. CHESTER MARSH

Last summer I was asked to visit a young blind girl at Camp Andree, the national camp for older Girl Scouts near Briarcliff Manor, New York, and to make some suggestions in regard to the arts and crafts which she might undertake. This young girl was at the camp through a plan which provided for the presence of one blind girl and a seeing buddy, one crippled girl, and two deaf girls among the 1936 campers. Careful selection of these girls was made by the director of Camp Andree on the recommendation of authorities who knew the girls. Each girl was assigned to the unit whose group offered most to her. This was in accordance with the usual camp policy. The purpose of this experiment was to give each of the girls a normal, happy, worthwhile Girls Scout camp experience, and at the same time to help National Headquarters to gain experience in the possibilities and the problems involved in camping for the physically handicapped.

When I arrived at camp the girls were all in the troop house working on various crafts. I sat down, and took out a quilt which I was piecing, a brown and tan "Hunters Star," and looked over the merry group as I sewed. So well adjusted to camp life and so well assimilated into the group was M—, the girl whom I had come to see, that it was some time before I located her. Happy, laughing, showing no timidity, I could hardly believe that she possessed the physical handicap of blindness.

Through this and subsequent visits, I learned many things—the most important of which was that, left to myself to choose crafts for a handicapped child, I should invariably underestimate her ability.

It is difficult to persuade normal girls with good eyesight to do creative design, yet M— unhesitatingly worked out an interesting design for a bead belt. With a clover leaf as a motif she worked out her own color scheme—a light green conventionalized clover against a dark green background with a yellow spot, "to lighten up the design."

The beads were placed in envelopes on which the separate colors were marked with needle pricks in the corners. M—'s only difficulties occurred when the beads spilled on the floor, ("it gives the other girls something to do"—laughed M—) and when she listened to her companions' chatter with such interest that she forgot which color she used last.

M— was interested in the quilt I was making — she wanted to "see" it so we spread it upside down on the table and she ran her fingers over the seams, asking about the color of each block. She soon "saw" the complete star and background and wanted to know about other patterns.

"I can do that," she said, "I think it will be great fun," and I knew she could.

She modeled a very good head in clay, touching the features delicately, with her sensitive fingers. Very few of the crafts that stirred her interest were impossible for her and she worked out ingenious ways of doing them that we, with sight, would never have thought of.

Never again do I want to list crafts for the handicapped children. As with other children, I like to put before them all of the interesting things that can be done and give them the opportunity of choice. They will go much farther than we can anticipate. Sometimes, if the actual creative activity is impossible, the appreciation of the work of others and an interest in the history and origin of a craft is of great interest.

The fourteenth of Leonard Hardcastle's series of articles on School Geography appeared in the April issue of *The Teacher of the Blind,* published by the College of Teachers of the Blind. This particular article deals with "First Lessons on Scotland" and "The Natural Regions of Scotland with Their Subdivisions."

DOCTOR ALLEN SAYS:

"Men commonly use only a part of the powers which they actually possess and which they might use under appropriate conditions." (William James.)

Read Emerson's essay on "Compensation" and Mrs. Leo Everett's booklet on the "Privilege of Pain." Ponder these brief writings along with William James's essay, "The Energies of Men," from which my subtitle is quoted, and see if they do not color your teaching philosophy.

Undoubtedly blindness weakens most of its victims; besides, its general effect in exciting pity rather than helpful service accounts for much defeatism. But that is another story.

Most of us teachers of blind youth know instances where the condition seems to have been made a stepping-stone to superior attainment. When any one lacking the help of his eyes at school so strengthens his memory and native powers of concentration that he not only goes on to college but often outranks most of his classmates there—does not this show us, who have ourselves depended overmuch on books, that more reliance on brains might have developed us faster and farther toward capacity? Reading is the easier, possibly the better way for most people. Yet, prior to printing, there were scholars. While books were manuscripts and rare, students used to flock to such universities as there were simply to listen to the great teachers. Even today students at certain law schools in England must dine in commons as a part of their training, their professors realizing that table discussion of the morning's lectures is more clarifying than reference reading alone. Why then should I not urge my student teachers of the blind to dispense with note taking in class and, instead, to confine their attention to the lecture, but always to write it up the same day? I do exactly this and add that such procedure is the one which blind students have to follow and which so strengthens latent powers of concentration that those who go on to college are able to succeed there. And I declare: "The more you yourselves practice your prospective blind pupils' advantageous methods the better you will understand their psychology, certainly a fundamental matter." Education by radio may become a saving instrumentality to some book-minded youths.

Back in the days when there was no embossed Virgil a student, who had just read his Caesar from the braille, translated the Aeneid directly from the lips of his tutor, aiming to make himself independent, at the University, of texts not in braille. Another boy who had come to us soon after having been blinded in his first year at high school, on finding our tangible means and methods slow, began to use his mind instead and gradually so to outrank his fellows that we, on learning that conditions favored his return to his home school, encouraged him to go. He went; and there found it great fun to vault over one grade after another, outclassing everybody who depended on pencil and paper. In fact, he finished the regular course there only a single year behind his original class, and then proceeded to do college and law school in quick succession, having lost in all but a half year of time through his blinding. But what hadn't he gained in power?

This instance taught us a lot; particularly that if even teachers of the seeing might profitably put less reliance on artificial aids to instruction and more on inherent capacity of the mind, why for mercy's sake should not we do so in our teaching and, in as many instances as possible, study how to help our pupils turn their liability into an asset?

COMMENTS ON CARPENTRY WORK FOR THE SIGHTLESS

HENRY SCHOBER

When I consider today the work that has been accomplished by the boys in the carpentry class of The Catholic Institute for the Blind, I cannot but smile at the thought of the doubtful and hesitant attitude with which I accepted the responsibility of conducting this class about two and a half years ago.

For some years previous to that time, I had associated rather closely with the boys during their hours of recreation. I had enjoyed many games of baseball and football with them. I had marveled at the way in which they ran fearlessly about their playgrounds. I had seen them box, wrestle, and swim. But in spite of the various activities in which I saw them take part; in spite of the fact that I very often forgot these boys were children without sight, the idea that they might ever be taught to be efficient carpenters was a bit beyond my power of belief.

However, my motto through life has always been, "If a thing is worth while, it deserves a fair trial." I had often wondered about the fields that would be open to these boys for economic security in future years. I realized that they were deprived of the use of their eyes, not their brains and hands. Furthermore, I was eager to test my initiative with the task of devising a method for teaching these boys to use carpenters' tools efficiently.

My first step in the undertaking of this new work was a visit to one of the carpentry classes for the blind already established in New York City. I examined the tools used in the class and found that they were for the most part the same as those used in the carpentry classes of our public schools.

I was a bit disappointed, however, to discover that the teacher cut out and prepared most of the material necessary for the articles to be made by his students. This he attributed to the fact that the boys had no means of measuring accurately anything less than half an inch. He also stated that the danger involved in the use of many tools made the handling of them by the boys impossible without constant individual supervision.

Of course, I had no idea as to whether or not the purpose of this class was to prepare the boys for the making of a living at carpentry work in future years. But somehow, I was not completely satisfied with this plan of teaching for my class. I aimed to have each student do his work from beginning to end with as little assistance as possible, and to use without fear every tool needed in the process.

With this determination firmly fixed in my mind, I constructed a type of work bench which I considered practical and helpful for a sightless carpenter. Each bench is large enough to accommodate six students with three working at either side. Running along the center of the bench is a hollow trough containing places carefully cut out for each individual's tools.

Every student is equipped with a ruler, a marking gauge, screw driver, scratch awl, square, smoothing plane, block plane, jack plane, a pair of dividers, a hand saw, and a vise. In addition to this equipment we have in the shop numerous other things for general use such as: augerbits for various types of designing, a miter box for cutting wood, and a machine for sharpening tools. I might remark here that I am greatly pleased with the ability of the boys to sharpen their own tools without assistance and with no difficulty.

The first obstacle that presented itself to me in my search for tools was my failure to find on the market a ruler that would enable a person without sight to make accurate measure of less than a half inch. So I patented a ruler of my own, and it has proven to be very successful.

The ruler is an aluminum one with a straight edge and a beveled edge. It makes

possible the accurate measuring of a sixteenth of an inch. A sixteenth of an inch is indicated by a crack running half way up the beveled edge, just large enough to be discerned by the finger nail. A similar crack is used to mark an eighth of an inch, but it is extended to the end of the beveled edge.

The quarter inch mark runs a tiny bit beyond the end of the beveled edge and is terminated by a small raised tack. Running just a little beyond this raised tack is another tack that is terminated by a short raised line and marks the half inch.

Braille numbers made with tacks are placed at the inch marks. And thus we see that when a student is asked to measure six and three sixteenths inches, he locates the braille number 6 for the inch mark, and then runs his finger down the beveled edge until he finds with his nail the short crack lying between the eighth and quarter inch marks.

Closely connected with the ruler we have another important tool, the marking gauge. Here again I found the ruler to be very useful. On it I placed a movable iron head which can be set at any given point and fastened by means of an adjustable screw. At one end of the ruler there is a pin for the purpose of marking the wood in a specific place.

When a boy is asked to cut a piece of wood with certain dimensions, he squares the edge of his board, finds the required dimensions with his marking gauge, and then draws the ruler along the board, making the line of demarcation with the pin.

My experience with the carpentry class at the Institute has filled me with ideas concerning the improvement of tools already on the market, so that they might be used easily and capably by the sightless. I feel perfectly confident that the lack of adequate tools for this field is due to the fact that no one has ever been interested enough to discover and try to eliminate the difficulties most responsible for the lack of efficiency.

We have made a few more improvements in our tools that I believe to be worthy of mention in this article. For instance, we have a braille protractor on the miter box, with braille figures at the degree marks, so that the boys can cut accurately a triangle, square, circle, or any type of figure called for by his work. Then too, I have placed a protector on the saw to keep it from jumping out of place when the boys are working at the miter box.

A little lip constructed on the edge of the square prevents the scratch awl from slipping over the edge when the students are drawing lines on the wood. A similar device makes planing more simple by preventing the plane from rocking while it is in use.

The work which the boys have done in the past two and a half years has been of great satisfaction to me. I feel that they have accomplished wonders when we consider the fact that there are but five boys in the advanced class, and none of these has yet reached the age of sixteen years. The time of our class period is limited to an hour and a half each evening during the school week.

So far the students have turned out tie racks, tabarets, book racks, coat trees, lawn furniture, easels for use in the classrooms throughout the school, and a small chapel altar for the nuns' chapel. Their latest piece of work is the construction of a set of wooden panels to replace the glass ones originally set in the schoolroom book cases. I might add here the fact that we have had no trouble in disposing of the articles not taken for use in the building. Practically every article has been sold.

These accomplishments have assured me that with the proper financial start and the employment of interested and competent instructors, the field of carpentry work could be made a practical one for the sightless. I realize, of course, that there is still plenty of room for improvement in our little shop. One of my greatest ambitions is to see the day when I can take a very active part in developing carpentry work to the point where it will enable sightless workers to produce as rapidly and as efficiently as the seeing.

PROBLEMS INVOLVED IN TEACHING SPELLING TO BLIND CHILDREN

NEAL F. QUIMBY

The problem of teaching the spelling of English words to seeing children is a complicated one, and the procedures which have been developed have been far from ideal. Obviously the problems presented in teaching this subject to the blind are even more difficult.

Dr. Margaret E. Martin has listed a number of reasons which help explain the retardation of blind pupils in spelling.

"Blind children are frequently found not to be good spellers. There are several evident reasons which account for this condition in blind children more than in seeing children. They do not have the opportunity of seeing words written, such as occur in advertisements, current periodicals, on posters, signboards, etc., by which means seeing children more or less unconsciously absorb a great deal of spelling. Many children in the junior and senior high school enter these more advanced grades from the public schools where they have received little training other than by oral methods; hence both reading and writing have been neglected. Furthermore many students do not master braille as a tool subject readily enough to read with facility; therefore, their reading is not sufficiently extensive to increase their ability to spell. Again, like many seeing children, some blind children read mechanically and never observe the spelling of words; or they read just for the story and become so absorbed that they derive little other benefit.

"Blind children are apt to be more amenable, and even docile to the point of being passive, than the more active seeing children. The teacher's problem is thus to stir rather than to curb her pupils. The personality of the teacher is particularly reflected in her blind students. She must always be on her guard that her interest does not diminish or lag. When a teacher has been able to convince her students that her subject is worth while, then half the battle is won. Children have a sense of values that is too often disregarded. Much of the trouble that has arisen in the past in the learning or rather teaching process has been due to the fact that those in authority have arbitrarily tried to superimpose their own ideas on unwilling victims.

"Children usually realize whether or not they can spell. Often they are anxious to make improvement and are at a loss how to begin. Their hopelessness is intensified when they not only feel their own incapacity to find a way to improve but have no assurance that the teacher can help them. They see little aid to their perplexity in learning a stated number of words periodically that has no particular connection with their daily activities. What does it mean to a child to hear that he is about to spell the hundred most commonly misspelled words? He would see much more value in a list of a hundred words that he has misspelled.

"How is a child to be made to wish to spell correctly? The answer is simple. He can't be *made*. He can't be made to do anything unless he wills to do so. But a desire can be created within the child to will to spell better. There is no cut-and-dried way to accomplish this. Individual differences in children are too great for 'a way.' A teacher's ingenuity will be called upon to bring about this will to spell correctly. She must create adequate incentives.

"Sometimes it is a matter of a child's pride that must be touched, and again it is a child's sense of values. The important task is to find the correct stimulus. Often a child will suddenly realize that he is a comparatively good speller. He takes pride in this realization and makes an effort to reach a higher level. Again a child is unhappy because he is deficient in spelling and will make every effort to improve. In both of these cases the teacher has a more or

less simple task. She may encourage the child to learn a number of new words a day giving him extra credit for this work. Again she may assign special compositions or exercises for the child to write, employing words that he wants to master. Sometimes it is helpful to stimulate a pride and interest in class progress which may be stressed with that of individual progress."[1]

There are a number of other difficulties, which handicap blind spellers, which must be considered.

1. Dependence upon pronunciation or vocal sounds.

2. The small amount of time usually available for practice in writing words on the braille slate.

3. While blind children learn to spell by writing on a braille slate, with blind people the chief use for spelling is in typewriting.

4. Even good braille readers can not read so rapidly as seeing readers. According to Dr. Hayes, teachers of the blind should expect their pupils to read at approximately 1/3 the rate for seeing children.[2]

5. We may assume from the experiments of Lay, Mead, Turner, Pearson, and others that visual presentation is the most important means of presenting spelling to pupils. This means the blind pupils are dependent upon the secondary methods of presentation of spelling material. Teachers of the seeing will use a combination of visual presentation, oral spelling, and writing to obtain the best results whereas the teacher of blind children must forego the important visual approach.

Dr. Samuel P. Hayes has made several studies of blind pupils in a number of schools which throw some light upon the teaching of spelling. He found that the spelling test arranged by Starch by taking words by chance from a large dictionary, eliminating the obsolete and technical words and then dividing the rest into sets of 100, shows the blind decidedly below the seeing. He also discovered that the Ayres spelling test based on a 1000 word list from business and every day correspondence is less difficult for the blind but their showing is still below the average for those with sight. In the Ayres test he finds 90 pupils or 21% below passing. In view of the above, it is strange to learn that Dr. Hayes found the blind to be well above the average in rote memory as tested by the Prossey Rote Memory Test. The blind also did surprisingly well in Prossey's Logical Memory Test.[3]

The writer, with the cooperation of the English department, made a study of 41 pupils from the 6th to the 9th grades inclusive. Through interviews and an analysis of the written work of the pupils an attempt was made to discover the causes of difficulty in spelling. I.Q.'s as measured by the Hayes' adaptation of the Terman Revision of the Binet Tests, ranged from 87 to 137.

It was found that much of the difficulty was due to a small number of causes.

1. Unable to read or write braille with reasonable facility—13.

2. Had not mastered the steps in learning to spell a word—7.

3. Needed more time and practice—17.

4. Sensory image of braille dots weak —6.

5. Did not hear pronunciation and cannot pronounce word correctly—5.

6. Copies word incorrectly—3.

7. A poor attitude towards spelling was a contributory cause in many cases.[4]

Although there was a great deal of overlapping with a number of pupils, the causes of spelling difficulty were well defined.

These difficulties suggest a number of remedial measures which should prove an aid

[1] "Developing a Spelling Conscience," M. E. Martin, *The Teachers Forum for Instructors of Blind Children*. Jan. 1935, pp. 56-57. American Foundation for the Blind.

[2] "Self-Surveys in Schools for the Blind," 1921, S. P. Hayes

[3] "Self-Surveys in Schools for the Blind," 1921, S. P. Hayes.

[4] "Spelling Difficulties in a School for the Blind." Pa. Institution for the Instruction of the Blind, 1935.

in developing better spelling in schools for the blind.

1. There is a need for even greater emphasis upon the reading and writing of braille. This is especially true for those who enter schools for the blind in the middle grades.

2. The steps in the teaching of spelling must be emphasized until the child has learned them.

3. Extra periods must be assigned for those who need them.

4. Make the most of the auditory and motor imagery.

5. Avoid excessive recitation. Make sure the pupil understands the word and can pronounce it.

6. The pupil should have a braille model of each word in order to avoid wrong copying.

7. The problem of mental attitude has been developed by Dr. Martin in "Developing a Spelling Conscience" as before quoted.

Another handicap those without sight encounter in learning to spell is the necessarily slow process of using the braille dictionary The mechanics of looking through the dictionary for a word is sure to be a tedious and discouraging process. The blind child must be taught the most efficient methods of using the dictionary.

"With any group of children the teacher needs to keep a close check on the correlation existing between the words which the children use and the words of which they actually know the meaning. Since an institutional child can manage with a very small vocabulary, few people are conscious of the fact that he attaches wrong meanings to words he uses frequently. There seems to be a lesser tendency among pupils in day school classes for the blind to misuse words. It may be that a larger vocabulary is forced upon them as a result of their being thrown into more types of situations than are most children in institutional schools. If this is true, it behooves teachers in institutions to make every effort to overcome the vocabulary draw-backs which are imposed by a limited environment." [5]

It has been a common practice to teach spelling, reading, and writing in the first grades in our schools for the blind.

Dr. Cutsforth claims that reading braille requires a degree of maturation which the primary child has not reached. This results in over-fatigue and a dissipation of nervous energy.[6]

Dr. Cutsforth is probably justified in saying that we introduce the mechanics of braille too early. It is easy to forget that the ability to read with the eyes and the ability to read by feeling small raised dots are not identical and do not necessarily mature at the same time.

It seems probable that as good or possibly better results may be secured by postponing the teaching of the mechanics of writing on the braille slate and using the braille book until the second school year. Spelling in the first grade should be incidental and informal.

There are innumerable problems concerning the teaching of spelling to the blind which might be investigated:

1. Do individual words present the same difficulties for the children without sight as for seeing children? Are there certain types of spelling errors more common to the blind or is it more a matter of individual differences?

2. Does the social and economic life of blind people require the same spelling vocabulary as does that of the seeing?

3. To what extent does the factor of verbalism effect comprehension and the spelling of words?

4. Is the ability to spell words correctly on a braille slate easily transferred to the ability to spell correctly on a typewriter or does it necessitate a considerable amount of relearning?

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[5] "The Dictionary as an Aid in Spelling." *The Teachers Forum for Instructors of Blind Children.* February 1929, p. 6. American Foundation for Blind.

[6] *The Blind in School and Society,* D. Appleton & Co., 1933.

5. Granting that the typewriter is the most important medium of written communication between blind people and their seeing friends, should not typewriting be taught very early in our schools and should not it be emphasized as an effective method of teaching spelling?

6. What effect does the teaching of braille contractions have upon spelling? Can the lessened opportunity to read complete words be compensated by other methods of improving spelling so that the pupil can cover more reading material? A blind person can read nearly twice as much material using braille contractions.

7. What effect does the "word method" of reading braille have upon spelling?

The answers to these problems will help solve some of the questions involved in teaching the blind to attain reasonable standards in spelling. There is no available evidence of any conclusive research on any of these major problems. There is some evidence to show that the use of braille contractions even in the early grades does not appreciably affect spelling, as the Ayres Scale does not rate schools teaching contractions in the 2d grade lower than the others.

The opinions of teachers of the blind vary as to whether certain words present difficulties peculiar to the blind. The consensus of opinion seems to favor the idea that word difficulties are more a matter of individual differences than a question of sight.

The problem of the transfer of the ability to spell in braille to the ability to spell on the typewriter should be interesting. It seems likely that the transfer here would be very large. In all probability, however, the use of the typewriter in the teaching of spelling should be stressed more than it is at present.

Until adequate research has been done, we must base our spelling program and procedures upon those used for seeing pupils. This means the same steps may be used in presentation and methods as with seeing pupils with only such adaptations as the lack of vision will entail.

Words derived from materials covered in class, approved word lists, and lists of the words which have been misspelled by the pupils should form the basis of the work.

The spelling lesson should be based on the activity the child is at present experiencing. Teach the child the words in his history, geography, or English lesson that he is actually working on. Teach him the meaning of the words as well as the pronunciation and spelling. Sometimes there are words in a lesson which are beyond his present comprehension. These may be omitted by the teacher.

The problem of individual differences is a serious problem with seeing children, but it is magnified when you are working with those without sight.

The small size of the classes found in most schools for the blind facilitates the teachers' problem in caring for individual differences. This does not mean teachers for the blind do not need tests to help them discover the abilities and disabilities of the pupils. Adequate testing is a necessity whether you are teaching those with sight or those deprived of their vision.

A spelling program based upon modern educational aims, following recognized teaching procedures, using adequate testing devices, and adapting these to the needs of the blind will achieve a real measure of success.

Dr. Sara Stinchfield Hawk, in charge of Research at the Hill-Young School of Speech in Los Angeles, California, will give two courses in Speech Correction and Clinic at the six weeks summer school at Pennsylvania State College, State College, Pa., from June 28th to August 6th. The Undergraduate Course will be for the elementary and special teacher. The Graduate Course will stress the new moto-kinaesthetic method for children with reduced auditory perception, deafness, or visual defects. Dr. Hawk desires to have some teachers in the course from schools for the blind.

THE TEACHERS FORUM
for
Instructors of Blind Children

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The Editor will not be responsible for opinions expressed in signed articles.

May, 1937

SENATE BILL 1634

Senate Bill 1634, asking for Federal aid for the Education of Handicapped Children, was introduced in the Senate on February 19, 1937 by Senator Claude Pepper of Florida. A hearing was held before a subcommittee of the Senate Committee on Education and Labor on April 8th and 9th, at which representatives of the different groups of handicapped were given an opportunity to present arguments in favor of this bill. At the time of writing, the bill is still before the Senate Committee on Education and Labor.

The case for blind children was presented by Robert B. Irwin, Executive Director of the American Foundation for the Blind, and L. L. Watts, President of the American Association of Workers for the Blind, both of whom are on the special committee of representatives from the various fields of the handicapped appointed by the International Society for Crippled Children. In the absence of Mr. John D. Bledsoe, Superintendent of the Maryland School for the Blind, and Chairman of the legislative committee of the American Association of Instructors of the Blind, owing to illness, Mr. H. M. McManaway, Superintendent of the Virginia School for the Deaf and the Blind, testified in behalf of the bill. Two students from the Maryland School for the Blind gave a demonstration before the committee of the methods of reading and writing braille.

The bill proposes to aid the states in their educational programs for physically handicapped children by meeting half the excess cost of such education over the cost of training physically normal children. The sum of $11,580,000 is authorized to be appropriated for each fiscal year by the Federal government for the purpose of enabling each state to establish, extend, and improve services for educating physically handicapped children. Of the total sum, $500,000 is set aside for the Office of Education to be used in the administration of the bill, $40,000 to each state which does not need to be matched, and $9,000,000 to be allotted to the states for matching purposes on the basis of the ratio of the number of their inhabitants, aged 5 to 20 years, inclusive, to the total number of inhabitants of the same age of all states. Both of the latter amounts are to be used to assist the states in paying for the excess cost of educating physically handicapped children.

The United States Commissioner of Education would have direct charge of the administration of this proposed law. The present bill includes a number of details concerning state plans, regulations for payments to states, and operation of state plans.

In this bill, the term "physically handicapped children" is defined to include the crippled, blind, partially seeing, deaf, hard of hearing, defective in speech, cardiopathic, tuberculous, and otherwise physically handicapped.

Individual copies of this bill will be sent to readers, upon request to the American Foundation for the Blind, so long as our supply lasts.

A. A. W. B. CONVENTION

Many topics of interest to instructors and administrators of residential and day school classes for the blind appear on the copy of the tentative program for the convention of the American Association of Workers for the Blind. The convention, which is to be

held in Toronto from June 28th to July 2nd inclusive, promises to be one of the largest ever held. Convention headquarters will be located in the Royal York Hotel. This hotel has ample facilities for entertaining guests and holding all meetings.

Following is a brief resume of a few of the topics which will be discussed.

The program will be formally opened on Monday evening, June 28th, with Captain E. A. Baker presiding. L. L. Watts, President of the A. A. W. B., will respond to the address of welcome.

Tuesday morning's session will be given over to a paper on "Policies and Practices of the Federal Security Board in Administering Aid to the Blind" by Frank Bane, Executive Director, Federal Social Security Board, Washington, D. C. The paper will be discussed by Dr. Merle E. Frampton, Principal of the New York Institute for the Education of the Blind, and Mrs. Mary E. Ryder, Executive Director, Missouri Commission for the Blind.

Group meetings will be held Tuesday afternoon. Of particular interest to instructors will be the paper on "What Shall We Do With Our College Trained Blind?" by Mrs. Eva B. Palmer, Executive Secretary, Cleveland Society for the Blind, as well as the program arranged for those who are interested in public school sight saving classes and prevention of blindness. On Tuesday evening Walter G. Holmes will discuss "Friendship Leagues for the Blind," and Dr. Newel Perry will present a paper on "The Field of Private Organizations in Work for the Blind." Motion pictures will complete the evening's program.

Miss Evelyn C. McKay, Research Assistant of the American Foundation for the Blind, will discuss "Federal Legislation for the Blind" at the general meeting on Wednesday morning. Reports of the work of the Foundation and the American Red Cross will also be given, as well as reports by committees of the A. A. W. B. Wednesday afternoon is held open for sightseeing, and a special dinner program is to be arranged for Wednesday night.

"Public Relations in Work for the Blind" is to be the theme on Thursday morning, and will be discussed from the English, Canadian, and American viewpoint. Group meetings will be held in the afternoon. One section is assigned to teachers in residential and public school classes for the blind, and one to administrative heads of schools for the blind. The program for Thursday night will be announced later. Friday morning will be given over to a business session, reports from group meetings, selection of the next convention city, and installation of officers.

President Watts and his associates are working hard to build a program that will contain a maximum of interest to all who are engaged in work for the blind. The partial program outlined above is tentative and is subject to change. It is hoped that a large delegation of interested workers will attend. Detailed information concerning registration, room accommodations, etc. may be obtained by writing to Mr. Stetson K. Ryan, Secretary, American Association of Workers for the Blind, State Office Building, Hartford, Conn.

Our Contributors

Dr. Samuel P. Hayes, Professor of Psychology at Mt. Holyoke College, South Hadley, Mass., in this issue of *The Teachers Forum,* gives complete directions for administering the third revision of the New Stanford Achievement Tests as adapted for use with the blind.

Mrs. Chester Marsh is Arts and Crafts Adviser at Girl Scout National Headquarters in New York City.

Mr. Henry Schober has charge of the carpentry work of the Catholic Institute for the Blind in New York City.

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The Teachers Forum

FOR

INSTRUCTORS OF BLIND CHILDREN

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KEEPING PACE WITH THE ADVANCING CURRICULUM
at the New York Institute for the Education of the Blind

CLARENCE R. ATHEARN

I. *The Changing Curriculum.*

Recently an infuriated parent withdrew his eleven year old son from a New York City public school because he was being taught hemstitching. Perhaps this family needed the results of a course in "home-making for boys." The incident, however, calls attention to the rapidly changing content of the school curriculum.

The rapid expansion of the curriculum in the last quarter of a century may be realized by comparing the report of the Committee of Ten in 1890, with that of the Curriculum Commission of 1926.[1]

The Committee of Ten dealt with only forty subjects, and implied a uniform curriculum in all schools. It was composed of subject-matter specialists, and sought a systematic, logical treatment of subjects deemed of disciplinary value. By 1926 when the Curriculum Commission of the Department of Superintendence met, some 150 subjects were being taught in the schools. The Commission maintained that the curriculum should take into consideration the social needs of the community and the capacities of the individual child. Its viewpoint was child-centered rather than subject-centered; its approach, psychological and sociological rather than logical and academic.

A recent investigator has estimated that within the last decade 35,000 new courses of study have been produced.[2] Thirty-two states have curriculum reconstruction studies under way at the present time.[3]

II. *Some Permanent Principles.*

These rapid changes and many new subjects make necessary some permanent principles of selection. Some of these permanent principles have been pointed out by Francis E. Palmer, Superintendent of the Iowa School for the Blind, in his address on "The Permanent in the Changing." His thesis is that "the goal toward which all true education moves has not changed fundamentally with the shifting currents of time."[4]

The principles which have guided curriculum developments at the New York Institute may be stated very briefly:

1. *Philosophical.* Ultimate reality in the educational process is to be found not in ideas alone nor in activities alone, but in the persons who have the ideas and perform the activities. We believe that this synoptic philosophy of personalism comprehends and transcends the acknowledged values of rationalism and functionalism. Spiritual adjustment, appreciation of life's meanings, the realization of eternal values in personality, should be no less an aim in the education of the handicapped than functional vocational adjustment.

2. *Ethical.* Educational values are rooted in ethical values. These include the physical, economic, and recreational needs of life, as well as the intellectual, social, and moral values. The balance of these values in a strong character is more important than the mere accumulation of knowledge.

3. *Psychological.* The whole child goes to school—intellect, emotions, and will; head, heart, and hand. The synoptic approach of gestalt psychology places the functional aspects of behavior in proper relation to the total self or person being educated.

4. *Pedagogical.* The curriculum should consist of experiences which arouse purposeful activity impelled by pupil interest, and result in the ability to adjust to the environment, and interpret life situations in terms of meanings as well as activities. The learning activities should grow out of real problems and provide for individual differences.

5. *Social and Civic.* The state has a right to require certain fundamentals necessary to good citizenship in a democracy. The curriculum should include experiences and interpretations designed to enable the pupils to understand our changing civilization, and discharge his social and civic duties. The social problems of the campus should provide a sufficiently large social laboratory for the student.

III. *Regents' Requirements Met.*

The New York Institute maintains courses of study which meet the requirements of the Regents of the University of the State of New York. Pupils must pass the Regents' examinations in reading, writing, spelling, geography, arithmetic, English, and United States history with civics, in order to receive their "preliminary certificate" for admission to high school.

A reappointment of from one to three years is possible to the elementary grades, but our pupils seldom fail or drop out at this point; most of them continue through the high school.

The Regents' requirements for the high school diploma have been increasingly liberalized. The required courses include four years of English, civics, economic citizenship, and American history, ninth year science, health and hygiene, a program of physical education, and a program of educational and vocational guidance. Major and minor sequences may be selected by the pupils. Of the sixteen units necessary for graduation, seven are required subjects, nine may be elective. These electives permit the adaptation of the course to the blind child's special needs.

IV. *General Objectives in the Education of the Blind.*

The aims of education for the blind are well summarized by the Committee on Minimal Essentials:[5]

"1. *Physical.* The development of a strong and healthful physique capable of resisting disease and meeting the unusual physical strain inherent in the handicap.

"2. *Academic.* A thorough elementary and high school education equivalent to that afforded seeing children.

"3. *Vocational.* Vocational instruction adapted to each pupil's ability with a view to enabling him to become self-supporting.

"4. *Social.* Socialization of each pupil to enable him to become an acceptable and contented member of the community."

Addresses and discussions at the last meeting of the American Association of Instructors of the Blind showed that schools for the blind are awake to the reformulations of educational objectives in the public schools, and alive to the necessity of adapting the curriculum to changing conditions and specialized needs.[6]

V. *Teacher Training.*

These social and civic requirements reveal the truth that the curriculum is simply one aspect of the educational process. In a sense, the curriculum is an abstraction. It is an experimental medium of personal relationships between teachers and pupils, in a total school and community situation. There are no pedagogical panaceas. Skillful teaching is essential to the success of any curriculum.

Trained teachers are the first essential. When Dr. Merle E. Frampton, Principal of the New York Institute, became Head of the Department for the Education of the Handicapped, at Teachers College, Columbia University, he inaugurated a program of cooperative service in training teachers for all schools and classes for the handicapped. In the New York Institute, thirty-two students are enrolled in training classes for teachers of the blind.

VI. *The Elementary Curriculum.*

The current trend in the elementary school toward the development of large units of life-centered experience has begun to make headway in schools for the blind. Such units are an integral and basic core of the primary school work at the New York Institute.

The primary schedule includes braille reading and writing, arithmetic, spelling, language, physical education, music, handwork, supervised play, and project work. The project work includes nature study, trips to school grounds, garage, kitchen,

poultry yard, farm and museums.

The work of the first three grades is largely organized according to the unit system; including units on the home, the farm, nature, the store, food, clothing, housing, and transportation. Numerous projects center around the seasonal holidays, and children's interests such as the playhouse project, and the circus project.

Elementary science, geography, and natural history are developed in a closely integrated series of units on *The Study of Our World*. These projects are closely correlated throughout with the tool subjects.

Drill on the tool subjects is regarded as essential. Approximately fifty per cent of the time of teachers and pupils in the elementary school is devoted to direct instruction in braille reading, writing, spelling, and arithmetic.

VII. *Junior and Senior High School Courses.*

The pressure for new courses in the high school, suited to pupils of varying interests, capacities, and needs, has led to four or five different types of curriculum reorganization:

1. The elective plan.
2. A core curriculum with variables.
3. Parallel curricula.
4. Special classes for "case groups."
5. Individual differences recognized in classroom instruction.

At the New York Institute we have sought to adapt the best features of these plans. Five parallel curricula are offered:

1. College Preparatory.
2. General.
3. Music.
4. Vocational.
5. Commercial.

The subjects, units, and methods of these curricula are selected and arranged with a view to meeting the essential objectives in the education of the blind, as outlined above.

A large percentage of our students are able to meet the requirements of the college preparatory course, and many former students now in college maintain a high standard of work.

In harmony with our objective to prepare students for life, and not to overstress the intellectual or academic achievements only, new features have been accredited in the vocational, commercial, and music departments.

At the New York Institute we believe courses in music should be increasingly accredited as of special value to all blind children. Music appeals to the blind as to the seeing because of its tone and rhythm which are immediately perceived or sensed, and carry with them an emotional response largely independent of visual interpretation.

Music has special educational values for the blind. It provides a legitimate outlet for the emotions, and develops wholesome emotional attitudes. It opens an avenue by which the blind may appreciate and respond to the beautiful. It develops patience, concentration, and trustworthiness. Music develops the spirit of cooperation. At the New York Institute, we look upon music as one of the main aids to the socialization of pupils and studies.

Attention is being given to choral work, instrumental instruction, piano, organ, and violin, and the concert recorder. Excellent instruction in band and vocational music has made this work most popular. Basic courses in music history and harmony are not neglected. Selected pupils pass the Regents' examinations in those subjects. Music scholarships are granted to graduates of other schools for the blind throughout the United States.

The basic task of the school in helping the blind to successful vocational adjustment is to provide them with a number of practical skills to which they can turn their hands. For this purpose it has seemed advisable to provide a wide variety of basic manual arts and prevocational work in numerous semi-craft and semi-trade lines. The objectives of these courses throughout are primarily educational; the utilitarian objective is secondary.

In addition to general shop work, woodworking, and the usual arts and crafts for the blind, the new courses in radio, automechanics, poultry, bee keeping, and farming, are proving popular. The school greenhouse is available for instruction in botany and horticulture.

The commercial course includes typewriting, braille shorthand, dictaphone practice, economics, merchandising, and commercial law. Actual news stand operation offers practical training.

Graduates of the school give the students the benefit of their experience in lectures on vocational topics.

In personnel counseling, and vocational guidance work, the school makes use of the vocational findings of the American Association of Instructors of the Blind and the American Foundation for the Blind; and cooperates closely with various placement agencies for the blind.

Toward the objective of socializing the blind pupil, increasing emphasis is being given to dramatics and club work. Classwork in dramatics eventuates in frequent assembly programs. The girls' Rainbow Club gave an adaptation of Maeterlinck's "Blue Bird." The Boys' Olympian Society produced the submarine tragedy, "Submerged." In addition to Boy Scouts and Girl Scouts, literary, radio, reading, commercial, language, and current events clubs have been formed. It is hoped that this work can be developed to the point where it is worthy of academic credit as it comes to function effectively in the attainment of this major objective in the education of the blind.

The objective of health has been furthered by new courses in social hygiene; medical work with children and parents, through our Parent Teachers Association; and through a program of preventive and corrective physical education for both boys and girls. The aims of this department are to train for healthful living, improve muscular weakness, develop better posture, skill in sports, fair play, self-reliance, fellowship, and leadership. Suitable games have been developed; wrestling is taught, and track teams compete with other schools for the blind.

Special classes and opportunity classes have been organized for retarded groups and for the partially blind. Much individual tutorial instruction is provided. Features of the Dalton plan which have been adopted are the individual assignment and the laboratory room for certain groups.

In the effort to meet the needs of the day and locality, new courses are being developed at the New York Institute. Such are the reorganized courses in general science, physics, biology, and botany.

The New York Institute is the only school for the blind in the United States to offer courses in Italian. These courses meet local needs and are accredited by the New York State Board of Regents.

Other courses recently reorganized to meet modern pedagogical and community needs are:

The World We Live In: Activity units for the third grade, correlating nature study, geography, reading, writing, spelling, and arithmetic.

Home Making for Blind School Girls: A life-centered approach to home economics.

Economic Citizenship: A treatment of this subject especially adapted for use in schools for the blind.

VIII. *Curriculum Research.*

In the secondary school there is still imperative need for re-evaluation of the traditional courses of study to determine what should be discarded and what retained, and ascertain how learning can be made more efficient of time and cost. Investigation, research, and experimentation are necessary to discover valid answers to these basic curriculum problems.

Much of the research carried on by the staff of the Institute consists of service studies related to the improvement of curriculum and methods. Among the studies now under way or proposed for the near future are the following:

Analysis of the results of the Stanford

Achievement Tests to determine frequency of typical errors, time allotment, and grade placement of various topics in the curriculum.

Re-examination of methods of teaching arithmetic to the blind from the standpoint of recent studies in that field.

Selection and development of texts and units in the Social Studies from grades four through nine.

The development of a check list of instructional activities for the self-improvement of teachers in schools and classes for the blind.

Diagnosis of the basic voluntary and vocabulary needs of pupils in a school for the blind.

Diagnosis of social and civic attitudes of blind school children, including attitude toward their handicap.

IX. *Setting the Pace.*

This period of curriculum reconstruction in many states gives an excellent opportunity for schools for the blind to obtain recognition and school credit for curricula independently built to meet the special needs of the blind. No longer need we merely imitate the schools for the seeing. But schools for the blind should strike out boldly to build curricula, meeting the special objectives of education for the blind; and then expect, from state boards of control, academic credit for courses of study worthily meeting these objectives.

X. *Reaching the Goal.*

In accrediting courses for the school diploma, consideration should be given to maintaining a balanced, well-rounded life. All the objectives urged by the Committee on Minimal Essentials should be fairly accredited—the physical, vocational, and social, no less than the academic.

To quote a distinguished educator—"If we knew that a student was to die the day he received his diploma, would we fill him with book-knowledge and direct his attention to vocational adjustment, or would we wish to acquire a sense of values, an acquaintance with beauty, and a working philosophy of life?"

The school curriculum must provide "an experience valid within itself, or not valid at all. The basic problem is the problem of self-mastery, or self-discipline. Character, personality, intelligence belong together."

Students desire self-realization above all else. "Let us openly make the appeal to their dearest ambition, to be significant persons, physically, intellectually, emotionally, spiritually." [7]

[1] Report of the Committee of Ten on Secondary School Studies. Published by National Education Association. 1904.

Commission on the Curriculum of the Department of Superintendence. National Education Association. Fourth Yearbook. 1926.

Foundations of Curriculum Making. Twenty-sixth Yearbook, National Society for the Study of Education, 1927.

[2] Betz, William, "The Reorganization of Secondary Education," in Eleventh Yearbook, National Council of Teachers of Mathematics. 1936.

[3] Junior-Senior High School Clearing House, Sept., 1936.

[4] Presidential Address, American Association of Instructors of the Blind, Proceedings, 1936. pp. 11-15.

[5] American Association of Instructors of the Blind, Proceedings, 1934.

[6] See A. A. I. B., Proceedings, 1936:

Quimby, Neal F., "An Ideal Curriculum for a School for the Blind." pp. 16-24.

Woodward, Mrs. Rice, "Objectives Fixed and Variable in the Education of the Blind." pp. 24-28.

Abel, Georgie Lee, "Changes in the Course of Study to Meet the Needs of the Day and Locality." pp. 102-106.

[7] Wriston, Henry M., President, Lawrence College, Bulletin of Association of American Colleges, March, 1926. pp. 11-26.

In the April, 1937 issue of *School Life*, published by the Office of Education, United States Department of the Interior, appears a brief description of the organization and work of the Configliachi Institute for the Blind (*O. P. Instituto Configliachi per i Ciechi*), Padua, Italy.

This institute is coeducational and consists of three departments: Education and instruction, to which children 3 to 15 years of age are admitted; professional re-education and manual training, to which students from 16 to 45 are admitted; and hospitalization for the incapacitated. The third department admits those, regardless of age, who are so incapacitated that they are not susceptible to education or re-education.

THE SPEAKING CHOIR

FRANCES D'ARCY

For the past year we have been experimenting with Verse Speaking Choir at the California School for the Blind. Several groups have been organized touching the various age levels and different mental abilties, and the following article is based on the knowledge gained from working with these groups.

Before beginning our discussion of Speaking Choir for visually handicapped children it is necessary that we understand what is meant by this term. Perhaps an illustration will clear the ground for us.

Speaking Choir is a form of group reading. Try to hear a favorite selection played on a violin. Add to this music the deeper tones of the viola and the still deeper strains of the 'cello. Harmony has been added to melody. Listen again, this time to your own voice as you recite a poem of your own choice. Now ask the friend on your right with a voice lower in pitch than yours to repeat the poem with you. Request that he use his natural pitch and his own interpretation but that he keep with you in tempo and in rhythm. Now ask the friend on your left with a voice higher in pitch than yours or that of your friend on the right to join in the recitation, making the same request as above stated. Again you have harmony; this time a speaking harmony. Multiply the voices; subtract some of the vocal rough places; add certain fine points of vocalization and interpretation and divide enthusiasm and love of poetry and you have a speaking choir.

This form of expression is not limited to any age group. Children as well as adults enjoy it. It has been successfully used in religious services, in recreational centers, in women's clubs and in schools and colleges. However, in this article we shall concern ourselves with a speaking choir for visually handicapped children.

To plead the cause of a verse speaking choir for visually handicapped children is to answer the question: "What personal development do the students acquire through participation in such a group?"

The adjustments which these children must make on entering school are many and difficult. The visually handicapped child is nervous, sensitive, and often rebellious. He needs confidence, poise, freedom of movement, enlargement of experience and socialization.

If the teacher can pool the problems of her group in at least one activity, and yet keep in mind the needs of the members of that group, she can accomplish much in a short time and yet make the lessons pleasurable to the children. The question is, what group activity shall she choose?

She wishes to develop a sense of confidence and poise. She wishes her children to learn to move easily and freely. She also wishes them to become skilful in the use of hands, head and body. She may even wish to correct certain minor speech defects. It is my belief that in such a situation, a verse speaking choir is the best group activity at her command. It allows practice in movement without resorting to cold drill. It gives the student an opportunity to dare to express himself without being forced into the foreground when he is not equipped to do so. Through the poems studied he becomes acquainted with an ever-increasing number of words, ideas, and images. He has motivation for the correction of any minor speech defects he may have because he wishes his contribution to the group to be as perfect as possible. He has a field in which he may know success in his limited way and he learns to make certain necessary social adjustments which help him to become a better citizen, not only in this group, but in the larger groups of which he is a part. The shy child gains courage and the dominating child learns that there are others in

this world with rights and abilities equally as promising as his, and many times exceeding his.

It is to be understood, of course, that the child taking part in this group activity is not always six years of age. He may be ten, twelve, fifteen, and even twenty. His problems are still present, and if he has suffered the loss of sight in adolescence these problems have probably doubled in complexity, quantity and intensity. Then, even more than with the younger child, must the skilful teacher find an activity which will be interesting and pleasurable, and one that is within the limits of those who are to make up the group. Again a speaking choir seems to offer promise.

Debate and discussion require reading and research and a certain degree of "stand up and take it." Plays require reading, memorizing of lines, freedom of movement, and the ability to stand up and face an audience independently, and as an individual playing *with* a group rather than *in* a group. In a choir he is working in a group as an equal. He recites with the group, learns with the group, performs with the group. So much for the value of a speaking choir as a group activity for the handicapped child. What method is used in handling such an activity?

If the children are poor, or non-readers, the poems to be studied should be read through with as little stress on interpretation by the teacher as possible, so that the student interpretation will not be a mere imitation of that given by the teacher. This reading should be followed by some discussion of the poem to develop interpretation. Suggestions of possible interpretation should be part of this discussion. At first the director may find it necessary to stimulate thinking concerning movement and interpretation by definite suggestions and pointed questions, but after a time the children will make their own suggestions and set their own interpretation. At this time the teacher must be careful to suggest and encourage movements that are natural and in keeping with the story and the spirit of the poem. When a movement is first introduced the teacher will find that she has to help in the timing and the direction of the movement and in the memorizing of words by going through the entire poem, adding the action as the poem is repeated. Then the teacher should take difficult lines and motions and fix them by short drill but she should try to have the children see the poem as a whole rather than piece by piece. Critical analysis on the part of the children should be encouraged in order that they may learn to criticize and to take criticism gracefully.

In dealing with children who can read, give a copy of the poem to each child. Since fingers do not all travel or comprehend at the same rate of speed, it is wise to allow the group a minute of silent reading before asking them to read the poem aloud. This should be done in unison. Later, various members of the group may read the poem to break the monotony of interpretation. However, each child should be encouraged to keep his own interpretation and not be influenced by that of his neighbor, unless he uses faulty rhythm or improper emphasis.

In choosing poems for the choir, choose within the interests and the ability of the group. Choose nursery rhymes, story poems, selections from the Bible, and nature poems.

Visually handicapped children are alone a great deal and need to store their minds with riches, and poetry is a great source of riches for all. The memorizing of poetry is to be commended for its own sake, but the added enjoyment derived from association with comrades in a speaking choir only adds value to the exercise. The mastery of body, the joy of self-expression, the glow of success because of the performance of a task, and the ability to get along with other people are some of the ends to be hoped for in working with such an activity. One of the most outstanding claims for a speaking choir is that it allows the blind child to take part in an activity which is not special to his group, but one in which all the children may share. Indeed it would be a novel arrange-

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IT IS FUN FOR THESE BOYS

Francis M. Andrews, Jr.

Five lads ranging in age from nine to twelve sit in rapt silence while the teacher reads a story of the jungle. A queer subject one might say for blind boys to study! This forest wilderness with its wild animals, tangled underbrush, and black men—what does this have to do with the teaching of arithmetic, spelling, reading, and English to blind, mentally-retarded children? Some may say that these boys should not be spending their time on such reading when there is more important work to do.

But that is just the point; it is not time wasted. These five retarded pupils, representatives of hundreds of others throughout the country, are finally tasting the joy of exploration. They are doing something different. A mystic atmosphere pervades the room. There is a feeling of excitement as they hear about elephants crashing through the underbrush, or tigers crouching in the tall grass ready to spring out upon some unsuspecting prey. What fun it is to hear about the monkeys swinging from branch to branch, chattering and scolding as they go! Why are we reading them such material?

Two answers may be given. First, the teacher wishes to create a desire on the part of the pupil to learn about new things. Second, we have a profound hope that these boys will come to realize that they too can share in the things others have discovered or learned. Day by day the work goes on. Progress is slow, for there is much that is difficult for them to grasp. We realize the limitations of these lads, but are not discouraged. A new feeling is being born. A new light of appreciation appears on the faces of these boys. They begin to show a desire to read for themselves, for there is so much that the teacher has no time to read to them. She, wise guide of youth, makes braille material available for them. Simple stories, full of movement and life, yet giving facts which the boys can use in their daily lives are brailled especially for them.

Hardly had our readings begun when the boys expressed a desire to build a jungle for themselves. They became so absorbed in their work that they soon carried their enthusiasm over into the Manual Training Department and there they were encouraged to make jungle huts. Some boys busied themselves making trees. The scene grew day by day. Beautifully molded elephants, slinking, crouching tigers, some well done, others crudely shaped by the boys, were placed in the jungle. Each boy did his part and all seemed to go well until the jungle huts were brought out from the shop. Then despair fell upon the group for the houses were taller than the trees! The boys decided that this would never do for as one of them keenly remarked, "Who ever heard of houses bigger than trees?" All wanted to know what could be done about it. Finally one lad decided that the only thing to do was to make the houses smaller so back they went to the shop, and before long the houses of proper size were placed among the trees.

The variety of kinds of trees quite fascinates the boys. Cocoanut palms and rubber trees offer almost limitless material for discussion. What story could be more intriguing than that of rubber. It seems a long jump from the jungle to our own back yard, but that is just what has happened. For where could the boys more quickly obtain first hand knowledge than at the Hood Rubber Company in Watertown. So another expedition is undertaken.

We begin to realize that we are accomplishing what we set out to do. The boys are interested, keen to tell the visitor about their unit, quick to find errors in subject matter. No longer must they feel that they are somehow "different," for other groups are similarly working on project units. These boys, also, share in our assembly exercises and receive, like their fellow students, a satisfaction from work well done.

DOCTOR ALLEN SAYS: CORPORATE RESPONSIBILITY

It was a great event in the outdoor employment of blind men when, back in 1878, Joel W. Smith, himself blind, got for his tuning department the keeping in condition of Boston's public school pianos. Realizing this fact he so wisely planned that his institution still does this work. First one, then two, of his best and most gentlemanly trainees were put on salary, being sent out daily from the institution where he as their manager could keep tab on them. Going about with smart-appearing guides, as they did, and never blundering in any particular, they became living advertisements to the multitude of school children who saw them, of the fitness of piano tuning as a calling for blind men. Just so, Elwyn Fowler, a disciple of this teaching, was long able to hold for himself and his fellows in blindness the public school tuning of the city of Worcester. And in Philadelphia, Liborio Delfino, graduate and exacting placement agent of the local institution, has both got and kept in hand for many years similar work for his people there.

Repeated slips of any kind, such as scratching a piano case, breaking a vase or what not, would have jeopardized the retention of the tuning in any one of these places. Indeed, some failing or weakness in a blind tuner doing private work has cost not only him a second call but many another, who happens to be blind, even a first call. Sometimes a service-minded friend of our cause, when recommending blind tuners in general, does it more harm than good. Here is a recent example. Such a friend having got a job for one whom she knew to be an acceptable workman had bidden him to do his best and so add this piano to his connection. In fact, he was again called to tune it. But alas! this time both owner and tuner slipped up. She having offered to motor him to her home, he accepted; he also let her feed him, which last proved to be the one thing too much; for now she declares that since she cannot be bothered with such dependent people she will employ only seeing tuners.

Some thirty years ago a railroad agent told us that his company had under consideration stopping further fare concessions to blind persons; yes, even carrying them over its lines unless escorted. Two untoward occurrences had brought the matter to such a pass: the first, an agent had reported the tongue lashing which an excitable blind musician had given him for purely imaginary neglect at the ticket window; the second, a blind man, also traveling alone, had sued the company for injuries received through his own carelessness—he had inadvertently walked through the rear door of the train in motion and had fallen off.

An agent of ours who has had difficulty enough, Heaven knows, in placing the few girls asking for summer jobs, declares that one out of three will throw up an average good position on the ground that it is too confining or lonesome or that too much is expected of her.

Again, a partially blind girl, over-anxious to show her independence, will rudely spurn the kindly proffer of help in crossing the street.

A single failure on the part of a severely handicapped individual may harm his cause more than a dozen successes help it. Can the schools teach mutual responsibility (as a blind placement agent declares they can and should) or must our wards learn it only through sad personal experience?

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ment if blind and seeing children were permitted to work in the same group. Looking back at this point and summing up our gains intellectually, emotionally, and socially, we may say that, through participation in a speaking choir, the visually handicapped child has increased his ability to meet life's problems.

CORRECTION OF BODY CARRIAGE AND POSTURAL DEFECTS THROUGH A PHYSICAL EDUCATION CLASS

M. B. Landis

One of the problems that concern every teacher of physical education, who wishes to carry out a complete program to engender the spirit of wholesome invigorating play into every boy and girl, is the remedying and correcting of postural defects. Many school administrators in the past have avoided this problem, because of lack of knowledge along these lines and on account of the difficulty of finding thoroughly trained instructors for corrective work. As our college curricula have expanded to meet the desires and needs of the students, more courses have been offered for such training. At the present time many of our physical education teachers are well prepared to do remedial and corrective work, for they have taken advantage of the courses which the colleges have offered to meet these needs.

The first thing to be considered in a good remedial program is a careful and thorough physical examination which includes the medical history of each individual. After this examination the corrective work should begin, but not before. Just what corrective work can be or should be given depends upon each individual case. Many mistakes have been made in the past and will be made in the future if the instructors do not thoroughly understand remedial and corrective work. It is, therefore, our duty to know exactly what we are doing in this field.

The main object of a postural examination is to determine what is the greatest possible mechanical efficiency that one can get from the body as a whole. A thorough knowledge of kinesiology, body mechanics, and variations, both structural and functional, from the normal are prerequisites in determining the procedure of correction for every case. The examination must be a careful inspection in which definite standards are used, and so far as possible the examinations and the exercises prescribed for both sexes should be given by the same individual. That is, if one person gives the examinations, that person should prescribe and administer the exercises.

The causes of postural defects are many but they are generally classified as those caused by diseases and those caused by environmental conditions. In many of our schools it is impossible to have a doctor to take care of orthopedic cases or to have the assistance of a psychiatrist. It is well, therefore, to resort as much as possible to the control of the environmental factors of personal hygiene and psychic training. The latter has been found to be a very important criterion to use in our corrective program.

General instruction as to the appearance and results of poor posture brings out the desire for better posture and body carriage. This, of course, stimulates the direct interest of each pupil, to find out just how he may overcome this defect. Where the causes are not pathogenic or habitual in nature, immediate results are gained by making the pupils "posture conscious."

Here many instructors have encountered a great deal of trouble. Because of the giving of improper commands, and the overdoing of some exercises, the muscles have undergone undesirable changes which have brought about shifted poor posture, reverse curves, and rigidity. In such cases great damage is done to the individual. Therefore, it should be borne in mind that over-development of one part of the body may cause a defect in another part. For instance, if the *erector spinae* muscles happen to be weak from some cause, the upper back will become rounded. Thus, to sustain the antagonistic balance, the lower back will become convex in shape and the extra load of supporting the weight of the rounded upper back will fall on the *erector spinae* muscles of the lumbar region and on the upper back.

The thriving growth of such cycles of defects is due to the poor strength balance of the muscles involved. During the corrective progress the strong muscles shorten and the weak muscles lengthen. In order that muscles may keep their antagonistic balance, they must have either equal leverage or tension, or a combination of these. There must be a balance or improper curvature will materialize. To develop the weak muscle without developing the strong muscle proportionately, becomes a problem. Unbalanced exercises of the stretching and strengthening type must be used, whereby the weak muscle will share part of the load and the overdeveloped muscle will weaken.

It is very important that the instructor know the history of the case at hand. Many of the pathogenic and injury cases fall immediately under orthopedic supervision. The environmental and psychic cases are the ones in which we are the most interested. Poor posture is often the result of incorrect exercises, improper body support, or poorly fitting clothing, especially stockings and shoes. Many deformities are encouraged by the use of supports or braces without intermittent exercise or use of that part of the body encased. Unbalanced toys, one-legged riders where one limb is overworked, unadjustable walkers, and other such apparatus are detrimental to the growing child.

It is not necessary to estimate how much corrective work is needed among the students of the schools in which I am at present interested. Whether the causes are pathogenic, accidental, environmental or psychic, there is much that can be done among handicapped pupils. The seeing can look in a mirror, and if they know what poor posture (or good posture) is, can see for themselves just what is wrong. But even though they see and realize the situation, it is necessary that we continuously keep the "posture conscious" plan at work. Posture weeks are used very successfully in many schools. Posture plays, poems, mottoes, and contests are also used with outstanding results.

The classifications in our school are made by the triple test of standing, sitting and walking, governed by means of the vertical line test and the wax pencil for marking the spinal processes. Where the schools can afford it, the silhouettograph is the most valuable means of identifying postural defects. A wooden frame, high enough for the tallest student, with strings running horizontally and vertically every two inches, will also give a good check on posture.

The individuals being examined should always stand in as nearly the same position as possible. The easiest and most accurate way in which to make a complete check from the head to the feet is for each individual to stand with the heels on about the same spot, with the feet three or four inches apart and parallel. The head should be held in such a position that the individual will be looking straight forward and horizontally on a level with the eyes. The arms should hang restfully at the sides with the thumbs touching the thighs. The stance should not be rigid. It should be restful, yet tense enough so that the body does not slouch. The individual may step onto an inking pad and then onto an imprint paper either upon entering or leaving the examination room. The observations are made from a front view, side view and back view. Every part of the body that will indicate defect is checked so that a person may know the degree of variation from the normal.

Every six weeks the students are re-tested and placed in four groups, Honor A, B, C and an unclassified group. Each student has the opportunity to work for a higher classification every six weeks. This advancement is also checked daily by teachers, matrons and supervisors, no matter where the pupil may be. This makes advancement really worth while because nobody gains a higher ranking unless he or she deserves it. It is quite a task to determine the exact lines of division of each class, but such a division is only valuable in showing progress. The classification is most valuable as a stimulus to the student, in that he

will endeavor to work toward better posture rating. This gives every pupil an equal opportunity to excel in something where other abilities are negligible.

In order to increase the interest in a new type of posture work last year, each class was identified by buttons. These buttons were labelled: Honor A Class (white), Class B (blue), Class C (orange). No buttons were given to the unclassified group. These were given to the students according to their respective classifications. This means of identification not only gave the students something tangible but gave them an indication of rank.

It was through the teacher's assistance that the "posture conscious" idea and the checking were so successfully carried out. Pupils who forgot about their posture and their classification were warned or reported to the physical education department. No pupil was to retain the pin and ranking of his respective class unless he really met the requirements of that class. Pupils could be demoted but this is not desirable. Because of this checking system it was more difficult for those receiving warning to obtain a higher ranking. For instance, a pupil in Class C could not reach Honor A if he slumped in his seat or stood on one foot, even though he could show perfect posture when tested at the end of the six weeks' period. These criteria of judging were used because many of our pupils are of the pre-adolescent age, and, although poor posture had not yet caused structural defects, it is known that such poor posture habits will be detrimental later, due to constant stress or strain.

It is felt that very little can be done before the adolescent age in the treatment of postural defects, although much can be done in controlling the environmental conditions. Many of the supposed defects of pre-adolescence, such as the prominent abdomen which is associated with a lower lordosis and a flattened chest, are not postural defects. In explanation, it should be stated that the prominent abdomen with its associated deviations is a normal characteristic of small children; consequently, those showing otherwise good posture should not be included in a corrective class for this condition. Most pathological defects of pre-adolescent children are due to previous illnesses such as rickets, lymphatic tuberculosis or epiphysitis, or to tuberculosis contacts, digestive disturbances or even constipation. Many of these ailments cause defects that come under the care of orthopedic surgery. It must also be remembered that the normal child of this age is exceedingly flexible compared to the adult. His muscles are more pliable and elastic and the ligamentous structures do not act as definitely as checks to hold the body in its best position. The balanced general activities and exercises which will aid in proper development are all that is necessary for this age level in most instances.

It is during the adolescent age and early adult life that the principles of correct posture should be given most attention. This should not only be done through physical education, but it should be the duty of every high school and elementary school teacher to encourage the development of good posture.

The most convenient way is to consider the upper part of the body first. The neck, shoulders, chest and upper back should be considered as a group. The head should be held upright, and the cervical and thoracic vertebrae, generally spoken of as the neck and the upper back, should be vertical. If they are, the position of the chest and shoulders will be good. The flat- or "pigeon-" chested child with a curved upper back, neck and shoulders forward, is usually suffering or probably has suffered from obstructions to breathing, generally due to adenoids or large tonsils, unless the history of the child shows rickets, tuberculosis or even malnutrition.

As one checks down through the body to the feet, it is found that most of the defects center around the major joints of the body, due more or less to gravity. It is a definite law of nature that trees, corn, or whatever grows upright which has been hindered by

accident or environment, tends to keep an upright position due to gravity pulls. The five major parts of the body which determine the position of the center of gravity are: (1) the abdominal viscera, (2) the heart, diaphragm and liver, (3) the thorax, (4) the shoulder girdle, including the arms, and (5) the head. In considering the joints and the centers of gravity, it is well to remember that the structures controlling motion are the bones, joints, ligaments, muscles and tendons. The bones are the rigid structures, the muscles are the motivating forces, the joints generally act as fulcrums, and the ligaments are the limiting structures at the joints. The tendons come into play only as a continuation of the muscles where the muscles pull over long distances. Since not all of the joints are rigid but can be moved by shifting the muscle tension of the antagonistic balance, many defects are found where the tension tends to adjust itself.

The defects of the cervical and thoracic region are always more or less directly associated with the major curve called kyphosis. The treatment of this curve should be directly associated with the treatment of the major curve called lordosis, which is located in the lumbar region. It has been my experience that it is almost impossible to treat these two major curves separately. If too much emphasis is brought to bear on one part of the body, the pressure that exceeds the ability and readiness of the muscles to change, will be shifted to some other part of the body and often stops at some joint due to its weakness and motility. It also must be noted that for each muscle or all muscles used to obtain motion in one direction, there is another muscle or group of muscles working in the opposite direction. Whenever a curve is to be corrected, it is done by the stretching of one set of muscles with tension against the strengthening of the other set of muscles, or there will be no correction. For instance, in lordosis, the correction depends upon the stretching of the overdeveloped and tightened lumbar *erector spinae* and a strengthening of the abdominals. A great deal can be done in correcting lordosis because the muscles of the abdominal region from the umbilicus down to the pubic arch are under a separate innervation from the upper abdominals. These corrections can be made by tilting the pelvis backward and drawing in and holding the lower abdominal muscles in place. This has a tendency to leave the chest and shoulders in their proper place; whereas, if the whole abdominal group is drawn in, it also draws in the upper half and affects the chest and shoulder muscles.

Where kyphosis does exist, the correction depends upon the stretching of the thoracic and anterior shoulder muscles combined with a strengthening of the elongated and weakened dorsal *spinae* muscles. In other words, we seek to gain a reciprocal balance between the groups of antagonistic muscles. Lordosis can also be corrected not only by exercising the abdominals and glutie, but by rotating the pelvis as well.

The major lateral curves of the spine are practically all variations of scoliosis. There are single, double, and occasionally triple curves which are always designated as left or right and as to their location along the spine. These curves are practically always associated with a raised hip and a lowered shoulder on one side, with the reverse on the other side. Often one leg, being shorter than the other, will tilt the pelvis and cause a lateral curvature. The causes of other lateral curvatures are both congenital and acquired. Among these causes we find defective hearing and vision, especially astigmatism, asymmetry or faulty bone development, wry neck, rickets, congenital dislocation of the hips, arthritis, joint disorders of the lower extremities and infantile paralysis. Many of those just mentioned give rise to the most severe and intractable cases which are least responsive to exercise except as a contributing form of treatment. Those which do respond readily to exercise correction are due more to faulty sitting or walking, the continuous carelessness of carrying loads in the same hand or on the same side, or by

standing on one foot. These causes, just mentioned, generally produce the C-shaped or single curve, right or left.

In the past it was the unadjustable seat in school that caused a great deal of scoliosis during writing or reading periods, but today most schools have adjustable seats. Even with this type of seat the long periods are detrimental. Mental fatigue, along with muscular fatigue, is many times reflected in the onset of lateral deformities. Even improper positions of holding the violin and similarly held instruments tend towards scoliosis. And, not least in importance, many defects can be traced to improper sleeping positions.

There could be much said concerning the above defects which affect the pelvis and its component parts which will not be discussed in any great detail in this article. Many of the changes made in correcting defects from the shoulders to the feet are so closely related that the pelvis generally adjusts itself with the correction that is applied to the other defects. Since we cannot take X-ray pictures here, we are unable to do anything special about pelvic tilts. During examinations it will be readily noticed even by the beginner that the high-heeled shoes worn by the feminine members of the group immensely affect pelvic tilts, lordosis, and a slightly protruding lower abdomen. If parts of the body are shifted vertically, gravity will always attempt to correct this wrong, even though it may produce a more detrimental change in the individual concerned.

It will be possible to omit the leg and knee observations at this time and examine the feet, because they have a great deal to do with controlling the leg and knee positions and vice versa. Due to weaknesses in the legs, knees and feet, caused by various diseases of early childhood, and even by babies walking before their legs were strong enough, we find curvatures of the elongated bones, the joints and the feet, which can be changed to some extent by exercise. Presumably, however, many of the joint injuries and malformations of the lower extremities cannot be corrected by exercise alone.

Sometimes it is very beneficial to check the individual's foot charts before examining the feet. At least, the foot charts and the results from the foot examination should both be checked before any treatment is prescribed. Probably the most outstanding defects to be found are club feet and flat feet. Flat feet are the result of the falling of either the anterior-posterior arch or the transverse arch. When the bones of the arches have been misplaced, the pain caused by this misplacement can be relieved by exercise, and the muscles often become strong enough to gradually force the bone readjustment. Of course, the best way to avoid the danger of flat feet is to prevent the occurrence of the trouble by using proper exercises to keep tense the muscles that support these arches. Practically all individuals with flat feet, or with that tendency, toe out in walking and thus show a supinated foot of various degrees. Therefore, a typical foot shows a turning out of the heel with the weight on the inside, a convexity of the inner contour of the foot, and a concavity of its outer edge. The chart will in this case show little or no instep or open space on the great toe side between the calcaneum bone and the great toe.

One of the best ways to make a foot chart, or take foot imprints, is to have each pupil go through the same process with the feet as that used in taking finger prints. The pupil should make the imprint by stepping with the full weight upon a white sheet of paper. Impressions of both feet should be taken and filed for accessible inspection. More impressions can be taken at various times to check each pupil's progress.

Some of the environmental conditions causing foot defects are habitual poor positions of the feet and knees. The feet are in the proper position when the weight is carried slightly forward of the ankle joints, so that the weight on the heel is equal to the sum of the weight carried by the first and fifth metatarsal heads. The position across the heads of the metatarsals laterally

should be such that the first metatarsal carries only slightly more of the weight than the fifth metatarsal. This weight distribution will, therefore, be best when the thighs are held in mid-position between internal and external rotation with the feet parallel and three to four inches apart. This gives the best mechanical advantage to the gastrocnemius muscles in controlling the backward and forward sway of the body. Along with the position of the feet, the position of the knees must be such that they are held fully extended and not forced back. This position would show the line of gravity passing slightly in front of the center of motion of the knee joints. If the individual carries the weight farther forward than this, it will cause the knees to be forced backward, thereby increasing the tension on the gastrocnemius from above. Carrying the weight too far forward will have a tendency to increase the forward inclination of the pelvis due to the pull upon the ham-string tendons which will in turn cause an increased lordosis curve or over-carriage. Neither should the weight be carried too far back because this tends to flex the knees due to other muscle pulls and adjustments. It is very evident that the defects of poor body posture have more or less relation to and dependence upon each other, both in the manner in which they are produced and the manner in which they may be removed.

Having given synopses both of the defects of body posture and their causes, together with brief statements of the proper elements of good posture, we are ready to give a few hints about corrective exercises. As stated before, the most that can be done without overdoing the matter, with pupils of the preadolescent ages, is to instill into each one the conscious posture idea in order to place strong emphasis upon the correct environmental conditions that will cause him to grow up with the best possible posture and body carriage. These pupils, and even the older ones, must be taught the proper positions of lying, sitting and standing.

The whole yearly program can be carried out under four heads: the examinations, instruction in body mechanics, contests and demonstration program, and the organization and teaching of an exercise system. The latter has not received its full stress, as it takes more than one year in many cases to obtain real lasting results. The first year of postural endeavor has brought us to our real work where the most cautious procedure and the most precise training is needed.

The following table will show the results of the first year's posture program at the Iowa School for the Blind. The foot defects are not included in these tests.

Tests	*Classes*				
	A	*B*	*C*	*D*	*Not Tested*
First Test	1	13	44	81	23
Second Test	16	36	47	48	15
Third Test	40	46	45	14	17
Fourth Test	48	54	32	12	16
Fifth Test	66	58	25	6	7

The percentage of each class for the whole school year from the above table is as follows:

Tests	*Classes*				*Not*
	A	*B*	*C*	*D*	*Tested*
First Test	0.6	8.0	27.2	50.0	14.2
Second Test	10.0	22.2	29.0	29.6	9.2
Third Test	24.7	28.4	28.0	8.6	10.4
Fourth Test	29.6	33.4	19.7	7.4	9.8
Fifth Test	40.7	35.8	15.5	3.7	4.3

These figures speak for themselves in that there was a greater change in posture for the whole school than was to have been expected. Different conditions exist in a school such as ours from those to be found in other schools. Almost all of our students have physical education every day, and, besides that, we have them in dormitories under our supervision twenty-four hours each day for nine months, with the exception of a two weeks' Christmas vacation. Also, the classes are much smaller than those in schools for the seeing, and consequently the students receive more individual attention, which is absolutely essential for corrective work.

It might be interesting to look over a few individual cases in order to see what some of the defects were. For instance, student No. 36, on November 1, 1935, had a slight C-shaped scoliosis curve, left, in the thoracic region, and, therefore, showed the right

shoulder down and the right hip slightly raised. He had medium kyphosis, with the head forward, medium lordosis, and a slightly protruding abdomen. Due to the fact that he was totally blind and not very active, he was given strenuous types of activities. Along with this activity, he was given exercises for strengthening the weak muscles and stretching the strong muscles. At the present time, No. 36 is very proud of the fact that he could gain A posture in one year. In order for one to succeed in such an endeavor, it takes real patience and determination.

Another example may be cited in the case of student No. 50, who also was tested on November 1, 1935, and found to have slight lordosis, protruding abdomen, round shoulders, slight kyphosis with the head forward, and shifting height of the shoulders. He was very self-conscious in regard to his condition because his greatest ambition is to be a musician. He also started out in heavier activity and worked diligently on his defects, whereby he gained a B rating by January first, and was rated with an A posture on March 1, 1936. Today he has the best posture in school.

No. 72, a girl student, was rated a high C on the first test, a B on the second, and an A on the third. Here probably is a case of the "posture-conscious" plan taking hold with almost immediate results. Many times it may be carelessness or neglect on the part of the student and again it may be inactivity which may have brought about poor posture habits. No matter what the cause may be, the student not only must remove this cause but must readjust the muscles in order to remove any curvature that may have developed.

These are only a few of the cases of poor posture in our school where special treatment was given. Many more cases could be cited to show the progress of individual students, as well as the progress made in the whole school. The best results were attained where we used the exercises of the three different classifications; stretching, strengthening and poising, with special emphasis upon the first two groups. Corrective exercises can be divided into strengthening and stretching exercises, yet these two sets of exercises must be given to different muscle groups in order to bring about compensation. Following these exercise groups, exercises for coordination or poising are given to increase the efficiency after correction has been well started. In the majority of cases, the best results were obtained when the tendencies towards defects were removed rather than the defects themselves. Direct work on defects often leads to the forming of defects somewhere else; for instance, the results developed from the command "straighten up," sometimes cause rigidity, lordosis, and an abnormal tilt of the pelvis.

In building up either the active or passive exercises to use in each individual case, we must know just what muscles are affected and how greatly. The instructor here needs a thorough knowledge of the muscles shortened or lengthened by each defect. There are many exercises that can be used in a general way. All shortened muscles must be stretched with as little strengthening as possible. Whatever strengthening is given one muscle of a working pair of muscles also strengthens the other muscle, even though you attempt not to use the shortened muscle more than necessary. There are several books that have been published on remedial and corrective work which classify the exercises according to their application and the uses for which they will be most valuable.

The amount of extra apparatus needed to carry on a successful posture program is small and can be built in the average manual training or carpenter shop. The rectangular frame that we use has the center vertical string and average height string in black in order to make checking easier. The two base supports of this frame are built to act as guides to the parallel position in which the feet are placed. This frame aids the observer greatly in checking the variation of body position while the individual is stand-

ing. An upholstered table with a tilting head is very essential for posture work. At one end of this are the straps on both sides to strap the individual down for passive exercises. Such a table is also very convenient for massaging.

The apparatus used for lordosis correction consists of two vertical steel pipes fastened to the floor and balcony about two and one-half feet apart. A canvas belt about six inches wide is fastened to these two pipes by means of two straps with buckles at each end. The belt is moved up or down to suit the height of each individual, since the belt is placed at the umbilicus or directly in front of the curve in the lumbar region. There is a definite form for this exercise and not over five bending exercises are given to each pupil daily. The rest of the apparatus is made up of stall bars and benches, pulley weights, mats, and such gymnasium apparatus as is considered regular equipment.

In conclusion, it is my sincere belief that physical educationists should guard carefully against the errors of overdoing corrective work, and, above all, go cautiously in attempting to correct defects that their training does not warrant. There are limits to many of our professions and for anybody to go beyond them is a mistake. On the other hand, instructors have failed to do corrective work when they were capable of doing that type of work successfully. It should be the duty of every school to carry out some type of corrective or remedial program. This work should be completed in so far as possible before the pupils reach the age of twenty-two or twenty-three years. After that age it is much harder to make postural changes and consequently those having postural defects at that age often have them throughout the rest of their lives. A good motto to remember is: "Posture expresses personality."

VOCATIONS FOR THE VISUALLY HANDICAPPED
By Louise Wilber, Ed. D.
Price, $2.25, postpaid.

TALKING BOOK MACHINES FOR THE BLIND

The W. P. A. project for the manufacture of Talking Book machines under the supervision of the American Foundation for the Blind recently received an additional grant, making possible the construction of 2,000 more electric Talking Book machines. This will bring the total number produced by this project to 17,000. The machines so constructed are allotted among the states in the proportion which their population bears to the general population of the country. For example, if a state has a population equal to one-twentieth of the population of the entire country, it is entitled to receive one-twentieth of the Talking Book machines made on the project.

These machines are loaned to a library or a state commission in each state, and that agency in turn lends the machines to blind people who cannot afford to purchase them for themselves. Blind people who need a Talking Book machine and cannot afford to buy one should make immediate application either to the agency in their state handling the machines or to the American Foundation for the Blind. Applications received by the Foundation will be transmitted promptly to the proper authorities. Action in this matter should be taken promptly. If you know a blind person who should have one of these machines and who cannot afford to purchase one, please write the Foundation at once, and ask the blind person to write also.

This project had not been in operation very long before it became evident to the Foundation that some of the work could be done by blind people. Five or six sightless persons were taken on first to do testing work. Later others were tried in the assembly line, and the proportion was gradually increased until at one time 100 of the 200 employees were blind. This was a great boon to these men as some of them had been out of work for upwards of ten years.

THE TEACHERS FORUM

for

Instructors of Blind Children

Address all communications to

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15 West 16th Street
New York, New York

The Editor will not be responsible for opinions expressed in signed articles.

September, 1937

CHANGE OF EDITORS

Since the last number of *The Teachers Forum* was issued, the former editor, Mr. Eber L. Palmer, has accepted the superintendency of the New York State School for the Blind, at Batavia, and the present editor has been assigned this pleasant task as one of his duties as the newly appointed Assistant Director of the American Foundation for the Blind. The plan and policy of the magazine will remain the same as they have been and it is hoped that there will be no deterioration in the quality of the material published.

The editor desires, through this column, to extend greetings to his many friends in work for the blind, and to wish for all of them a happy year of accomplishment. This also gives him an opportunity to welcome a number of new workers in our field and to congratulate others upon well-merited advancement. May they strive valiantly to bolster up the ranks which have suffered so grievously during the past few years from the loss of some of our greatest leaders.

The editor hopes that the superintendents of all of the schools will contribute articles to their professional magazines, and urge their teachers to do so. We should like to have at least one article from each school during the coming year.

We wish to invite the attention of new teachers particularly to the work which we are doing. Among our services are the publication of our two magazines in inkprint and braille, the maintenance of an exhaustive reference library and the preparation of reading lists, consultation service on all phases of work for the blind, cooperation with state and community agencies, mechanical and educational research activities in the field of blindness, and an employment service for professional workers. One of the newer services which we are prepared to render is the conducting of school surveys. In the light of similar work which has been done in public school systems and of studies made in our own schools, a rating scale has been prepared whereby strength and weaknesses of a school may be determined, and on the basis of which valuable suggestions may be made. We are glad to cooperate with all of you in every way possible, and trust that you will give us even more frequent opportunities to do so than we have had in the past.

A.A.W.B. CONVENTION

The seventeenth biennial convention of the American Association of Workers for the Blind, held in Toronto from June 28th to July 2nd, was one of the most successful ever held. Captain E. A. Baker and his colleagues of the Canadian National Institute for the Blind proved to be admirable hosts and Toronto an ideal convention city. Accommodations at the Royal York Hotel were all that could be desired and the city offered numerous attractions for the ladies and any of the gentlemen not too busy to take advantage of them.

Mr. L. L. Watts, as president, and Captain Baker, as host, deserve a great deal of credit for this splendid convention. A very large number of delegates was present and the sessions were well attended. The programs were well-planned, interesting and instructive.

The members departed from custom and elected a seeing man as the next president, our popular and genial host at the last convention, Superintendent A. C. Ellis. After

being largely responsible for the growth and success of the A.A.W.B. for the past ten years, our able and accommodating secretary-general, Mr. Stetson K. Ryan, retired from his arduous duties, and Mrs. Mary E. Ryder, Executive Secretary of the Missouri Commission for the Blind, was elected to this responsible position. Captain Baker was advanced to the office of first vice-president and Mr. C. L. Broun was chosen second vice-president. Mr. Francis B. Ierardi will continue to be our treasurer.

Two of the highlights of the convention were the presentation of a beautiful electric clock to Miss Lydia Y. Hayes, who had just retired as Executive Secretary of the New Jersey Commission for the Blind; and the presentation of a fine set of volumes on antiques to Mr. Ryan.

BRAILLE TYPEWRITERS

The machines of the third series of the American Foundation for the Blind braille typewriters should be ready for delivery during the latter part of October. As before, they are being manufactured by L. C. Smith and Corona Typewriters, Inc., and are practically the same as those of the two previous series. Paper rest arms have been added, which keep the paper flat as it is fed out of the machine, and the paper guide rack has been so adapted that it may be used for smaller sizes of paper. Minor mechanical changes have been made also, which tend to strengthen the machine.

These braillewriters are sold by the Foundation without profit. Despite increased costs of labor and materials, the price of the machine remains the same as before, $40.00, but we have been compelled to raise the price of the carrying case to $3.50 instead of $3.00. If the carrying case is not desired, a dust cover can be furnished for $.50. These prices are F. O. B. New York City, and the writers must be paid for in advance or sent C. O. D. The L. C. Smith Company has arranged for its agents throughout the country to service the machines when necessary at a reasonable price.

Various delays at the factory have postponed the completion of these writers from time to time, and many persons have had to wait for their machines for several months. It is hoped that there will now be a sufficient number of them to supply the demand for some time to come.

FOUNDATION SCHOLARSHIPS

The Scholarship Committee of the American Foundation for the Blind has approved the renewal for another year of the grants previously awarded to the following students: Gladys Anderson, Ohio; Troy Couey, Oklahoma; Robert L. Day, New York; Cecil Hartselle, Indiana; Helen Kaploniak, New Jersey; Dallas W. Lynn, North Carolina; Anthony Nello Manone, Pennsylvania; Dorothy M. McCutchan, Iowa; Prudence Patterson, New York; Diedrich Ramke, Louisiana; and James L. Soderberg, Wisconsin; and has selected from among many applicants the following additional persons to receive scholarships: Maxine Ball, New York; Ernest Bechtol, Ohio; Frances Ruth Davidson, Illinois; and Annette Dinsmore, Pennsylvania. Among the factors considered in making the awards were: academic record, financial need, character, personality, and practicability of vocational objective.

Our Contributors

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The Teachers Forum

FOR

INSTRUCTORS OF BLIND CHILDREN

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CAN THE BLIND PASS IN GEOGRAPHY?

SAMUEL P. HAYES, Ph.D.

The seeing readily admit that in so far as geography involves the learning of names of places and products, the blind might get along very well; with the common assumption that their memories are above average, one might even expect them to excel in this phase of the subject. But what can they do with maps, which form so large a part of the geography of the seeing person? How can they picture the location of the last war or the newest airplane route? And the psychologist, who knows about the tactual maps used in schools for the blind, wonders how maps of a different size can be of any use. He has learned the feel of the stretch of an octave, for instance, on the piano, and wonders how he could play octaves on a piano that has keys only half as wide. He has had just this experience in changing from a standard typewriter to one of the smaller portable machines, and remembers how often he strikes the wrong keys. William James raised this question back in the 1890's. "I am disposed to believe," he says, "after interrogating many blind persons, that the use of imaginary maps on a reduced scale is much less frequent with them than with the rest of us. Possibly the extraordinary changeableness of the visual magnitudes of things makes this habit natural to us, while the fixity of tactile magnitudes keeps them from falling into it. When the young man operated on by Dr. Franz was shown a portrait in a locket, he was vastly surprised that the face could be put into so small a compass; it would seem to him, he said, as impossible as to put a bushel into a pint."

Teachers of the blind know very well that their pupils can pass in geography and they will heartily welcome as an aid in educating the seeing public, Miss Clara L. Pratt's recent pamphlet on *Practical Geography For the Blind,* which gives pictures of the numerous devices planned to aid the blind in learning geography through the fingers, from the 100-year-old globe of the world thirteen feet in circumference made of seven hundred pieces of wood, which has always caught the eye of visitors entering Perkins Institution, to the braille maps, wall maps, puzzle maps, globes, season apparatus, plasticine maps made by the students themselves, and finally the wonderful sets of 350 geographical, historical and sectional maps produced as a W. P. A. project.

Just how successful this teaching might be, was one of the questions raised in the survey of ten schools for the blind in the early years of our research, and two standard tests of geography were included in our series, the Hahn-Lackey test of geographical information and the Courtis map test of states and cities in the U. S. A. In general we found the blind testing about up to the seeing standards in the information test, but decidedly below the seeing in the map tests. As my pamphlet giving the directions for these tests (*Self-Surveys in Schools for the Blind,* Pa. I. I. B. Pub., No. 2, 1921) has long been out of print and the tests seem very well worthy of further use, full directions for giving and scoring these tests, with norms based upon a considerable number of pupils tested in eight schools for the blind are here reprinted.

HAHN-LACKEY STANDARD TEST OF GEOGRAPHICAL INFORMATION

OBJECT: The purpose of this test is to determine the extent of the pupils' information in geography, and their ability to use their knowledge in simple problems. The authors list five specific uses for the test: (1) to measure the individual pupil's ability as an aid to classification or promotion; (2) to measure a class as a whole by comparison with an outside standard; (3) to measure the results of a year's work in geography; (4) to measure the balance between the different phases of geography

work; (by studying the nature of the exercises missed by her pupils the teacher may discover which phases of the work should receive more attention); and (5) to measure the merit of different methods of instruction such as map drawing, laboratory exercises, field work, problem assignments, departmental teaching, etc.

MATERAL: Ten 66 per cent questions from the Hahn-Lackey (13) Geography Scale for each grade. This scale is based upon 283,100 answers by 1,696 pupils in twelve schools for the seeing, and constructed in much the same way as the Ayres spelling scale. We have selected five memory questions and five thought questions for each grade list. Copies of the whole scale may be purchased from H. H. Hahn, Wayne State Normal School, Wayne, Neb., at seven cents each, or borrowed from the library of the American Foundation for the Blind.

Fourth Grade

1. Name four things out of which clothing is made.
2. Give two ways in which food, clothing, lumber and coal are brought to us.
3. Name four continents.
4. Name two necessary things that we get from the sun.
5. Name four races of men.
6. Give one way in which farming may be done in dry countries.
7. Give two ways in which rivers are useful.
8. Why should roads or streets be higher in the middle than on the sides?
9. Where do plants get water?
10. What makes clouds move?

Fifth Grade

1. Name the five great lakes of North America.
2. What are the two largest cities of the United States?
3. Name two ways in which the farmer helps to get food for us.
4. Give two ways in which water gets away when it rains.
5. What is the name of the circle extending around the earth midway between the poles?
6. Why does not the water flow out of swampy places?
7. Why do not the Eskimos build houses like ours?
8. What is under the ocean?
9. Where does the water in a well come from?
10. Name two ways in which winds are useful.

Sixth Grade

1. Name four fur-bearing animals.
2. Name four large rivers of Europe.
3. Name two kinds of food that we get from animals.
4. From what country do we get much of our coffee?
5. Which is the largest and which is the smallest—the moon, the sun or the earth?
6. What country of South America has a climate similar to ours?
7. Why is it warmer in New Orleans than in Chicago?
8. Why are camels such useful animals for traveling in desert places?
9. What is the cause of day and night?
10. What do the rivers do with the soil that they carry?

Seventh and Eighth Grades

1. How are valleys made?
2. Name two important crops raised in southern U. S. and tell why they are grown there.
3. Name a mountain range and a river between Europe and Asia.
4. What direction is Australia from Asia, and to whom does it belong?
5. Name a large lake entirely in the United States.
6. Why would you not expect Russia to have as many sailors as England?
7. Why are the great plains just east of the Rocky Mountains not good for farming?
8. A doctor advises a patient to go to a region of light air and warm climate. Where would he go?
9. What good may leaves do after they fall from the trees in the autumn?
10. In what part of Australia are most of the people found?

METHOD: Pass around blank sheets of paper and have pupils write name, age,

grade and the date at the top. Then say:

"I am now going to give you a test in geography. I will read to you ten questions, one at a time. After I have read a question, I will give you a reasonable time to write the answer. Do not write the *question*; write only the *number* of the question, and your *answer* to it. Are there any questions?"

Give further information as needed and then say, "Ready," and read the first question through slowly, twice, that everyone may be sure what it is. Then allow two, three, or even more minutes for the answer, as needed. Watch the pupils, and wait till most of them have finished. Then say, "Question 2 is this," and read it. Thirty to forty minutes should be enough for the test.

As this is a graded test, it will probably be better to give it to one grade at a time up to the seventh. But if two grades must be tested together, dictate the first question to one grade, and while they are writing, dictate the first question for the other grade, etc.

SCORING: Compare the pupils' answers with the following key, allowing full, half or no credit as indicated below. Multiply the total credits by 10 to change the score to per cent right. Many of the questions admit of only one answer, but the scale contains some questions to which the answers may vary. In order that the scoring of the answers by teachers of different localities may be uniform and the scores comparable with those of the scale, the authors suggest the following typical answers for full, half or no credit:

KEY FOR SCORING THE HAHN-LACKEY GEOGRAPHY TEST

Fourth Grade Questions

1. Leather, wool, silk, cotton, fur, paper, etc.
2. Any two: by railroad, wagon, mail, ships.
3. N. A., S. A., Africa, Eurasia, Australia, Europe, Asia.
4. Heat, light.
5. Caucasian or White; Indian or Red; Mongolian or Yellow; Ethiopian, Negro, or Black; Malay or Brown.
6. Irrigation.
7. Any two: fish, navigation, sport, waterpower, drains the land.
8. For drainage, so road won't be washed out, etc.
9. From the earth, from the air, from rain, from springs.
10. Winds, breezes, air, atmosphere.

Fifth Grade Questions

1. Superior, Michigan, Huron, Erie, Ontario.
2. New York, Chicago.
3. Any two lines of work: Plants grain and harvests it; raising cattle and farming; raises crops and milks; farming and selling things. (Allow half credit for only one line of work.)
4. Evaporation, absorption, runs away.
5. Equator.
6. Because they are low, because they have no outlet.
7. They have no wood, can't make bricks.
8. Earth, land, rock, stone, mountains, sand, plains, plateaus. (Any answer indicating a knowledge of the bed of the ocean.)
9. Out of the ground, from veins, springs, from little streams under the ground, from moisture in the ground. (Any answer clearly implying underground source.)
10. Any two: Bring rain, turn mills, fresh air, makes temperature equal, makes pressure equal, scatters seeds, causes ocean currents.

Sixth Grade Questions

1. Any hairy animal.
2. Danube, Rhine, Rhone, Thames, Elbe, Oder, Vistula, Dnieper, Don, Volga, Dwina, Seine, Loire, Tiber, and others.
3. Different kinds of meat are credited as only one kind of food.
4. Brazil, S. A., Mexico and Central America.
5. Sun, moon.
6. Chile, Argentina, Uruguay, Paraguay.
7. Rays fall more nearly vertically, farther south, nearer the equator. (Give no credit for ocean breezes, gulf stream.)

8. Capacity for water, can go a long time without drink.
9. Turning, revolution, or revolving of earth on axis.
10. Let it down in the valleys or sea, leave it on the bank, form islands, drop it at the mouth, drop it when the current is not swift.
(Any answer that indicates that rivers take soil from one place and put it in another place.)

Seventh and Eighth Grades

1. Streams. (Give half credit for glaciers, folding of crust.)
2. For first part, any two of the following: cotton, rice, sugar cane, fruit, corn, garden truck.
For second part: Long warm growing season with plenty of rain.
3. Ural Mountains and Ural River.
4. Southeast, and belongs to England.
5. Lake Michigan, Salt Lake.
6. Has few seaports, coast frozen up most of year.
7. No rain, no water, no rivers.
8. High parts of southern U. S. or Europe, etc.
9. Mulch, soil, enrich soil.
10. Around the coast, southeastern coast, northern coast, etc.

INTERPRETATION: If a single grade is tested, the teacher will be interested in making a scatter diagram of the pupils' scores, and tracing across it a curve based on the standard scores for the blind in Table I following. If a whole school is tested, a series of scatter diagrams and curves is suggested, based on chronological age, mental age, intelligence quotient and grade. We have no standards for mental age and I. Q. but some interesting points might emerge from the diagrams. For the curve by grades use the seeing standard of 66%. (This being a graded test each successively higher grade is expected to get 66% correct with more difficult material.) In all these scatter diagrams the vertical column at the left should show per cents, and the horizontal line at the bottom the C. A., M. A., I. Q. or grade. A sample scatter diagram may be found on page 5 of my *Self-Surveys in Schools for the Blind,* which should be accessible in school libraries in pamphlet form or bound with the *Outlook for the Blind,* 1921.

Table I

Results obtained in eight schools for the blind with the Hahn-Lackey test of geographical information

Ages	Number of pupils tested	Median scores in per cent correct	Standards for the blind
10	5	73	71
11	19	68	70
12	39	68	68
13	32	68	68
14	53	68	66
15	65	63	65
16	68	63	63
17	73	63	61
18	53	58	61
19	32	63	60
20	66	58	60
Total	505		

In each grade list the first five questions are memory questions while the second five are thought questions. Teachers will naturally consider which group makes more trouble for their pupils, and why. Also by the use of the authors' complete scale other sets of questions may be formed, for use at different times during the year, items being selected of equal, greater or less difficulty as indicated in the scale.

THE COURTIS MAP TEST

OBJECT: The aim of this test is to determine how clear an idea the pupils have of the location of the states of the Union on a map which is probably of a different size from the one used in their class work.

MATERIAL: Paper map of the U. S., embossed on a sheet 20 by 16 inches, 150 miles to an inch, which may be obtained through the American Printing House for the Blind. The boundary lines of the states, the water of the Pacific Ocean, the Atlantic Ocean, the Gulf of Mexico and the Great Lakes are indicated in the customary ways. In each state except the smallest, one or two cities are indicated by large dots and a number printed without the number sign.

METHOD: Pass around blank sheets of paper and ask the pupils to write name, age, grade and the date at the top of the sheet. Then pass one map to each pupil and give the following instructions:

"I want to see how well you can locate the different states on this paper map of the whole U. S. Please examine the maps. You will notice that only the coast lines, state boundaries, and a few cities are indicated. Near the middle of each state you will find a number, without the number sign. I am going to ask you to find various states on the map, one at a time as I read the names. When I name a state, you will please find it on the map, read the number printed in it, and then write the number and the name of the state on your slates."

Allow about 30 seconds for examination of the map and then say:

"I will illustrate with the state in which your school is located. All find ..... on the map. What is its number?..... Yes. Now please write this number and the name of the state on your slates. You may use contractions or abbreviations in writing the names. I will give the customary abbreviations as I go along.

"Now we are ready for the test. I will read the name of a state; you will find the state on the map, read its number silently and then write its number and name on your papers. You may put several answers on each line. Do not try to go back and change any answers. Does everyone understand?"

Answer questions about procedure and then read the states in the following order, omitting the home state used as an example. Use the form of words indicated below. Allow 45 to 60 seconds for the pupils to find each state and to write the number and name.

LIST OF STATES TO BE LOCATED

"California: Write the number and then C-a-l."

"Maine: Write the number and then M-e."

Texas, Tex.	Florida, Fla.	Pennsylvania, Pa.
Georgia, Ga.	Washington, Wash.	Tennessee, Tenn.
Michigan, Mich.	Montana, Mont.	North Dakota, N. D.
Ohio, O.	Maryland, Md.	Connecticut, Conn.
Rhode Island, R. I.	Massachusetts, Mass.	New York, N. Y.
Virginia, Va.	Oregon, Ore.	Illinois, Ill.
Wisconsin, Wis.	Kentucky, Ky.	New Hampshire, N. H.
Louisiana, La.	New Jersey, N. J.	Missouri, Mo.
Minnesota, Minn.	Vermont, Vt.	Delaware, Del.
South Carolina, S. C.	Colorado, Colo.	Kansas, Kan.
Indiana, Ind.	West Virginia, W. Va.	Iowa, Ia.
Nebraska, Neb.	North Carolina, N. C.	Alabama, Ala.
South Dakota, S. D.	Mississippi, Miss.	Wyoming, Wy.
Utah, Utah	Idaho, Idaho	Oklahoma, Ok.
New Mexico, N. M.	Arizona, Ariz.	Nevada, Nev.
Arkansas, Ark.		

When all have finished the test with the states, say:

"Now I want to make a similar study of cities. Find..... on the map (naming the city in which the school is located). What is the number of the state in which ..... is located? Yes. Now write the number of the state and the name of this city on your papers. You need not write the *name* of the state; just the number of the state and the name of the city. You may use contractions or abbreviations as before. I will suggest abbreviations. Write several answers on a line. Do not try to go back and correct answers, as time will not be allowed for this. Does everyone understand just what is to be done?"

Answer questions about procedure and then read the cities in the following order and in the formula suggested, allowing about 30 seconds for each city.

LIST OF CITIES TO BE LOCATED

"Chicago: Write the number of the state in which Chicago is located and the abbreviation, C-h-i.

San Francisco: Write the number of the state in which San Francisco is located and then the abbreviation, S-a-n-F.

Buffalo, Buff.
Pittsburgh, Pitts.
Savannah, Sav.
Galveston, Gal.
Omaha, Om.
New York, N. Y.
Cleveland, Clev.
Louisville, Louis.
Salt Lake City, S. L.
Richmond, Rich.
New Orleans, N. O.
Detroit, Det.
Philadelphia, Phil.
St. Paul, St. P.
St. Louis, St. L.
Kansas City, Kan.
Baltimore, Balt.
Denver, Den.
Rochester, Roch.
Duluth, Dul.
Portland, Port.
Seattle, Sea.
Boston, Bost.
Milwaukee, Mil.
Los Angeles, Los A.
Indianapolis, Ind.
Cincinnati, Cin.
Memphis, Mem.

SCORING: Score the pupils' papers with the aid of the following key, counting one for each correct answer. There are 48 states and 30 cities in the lists, but from these numbers the home state and home city must be deducted.

KEY TO THE BRAILLE MAP OF STATES

Cal.	Me.	Tex.	Fla.	Pa.	Ga.	Wash.	Tenn.	Mich.	Mont.	N. D.	Ohio
41	13	21	46	28	31	14	42	12	22	17	23
Md.	Conn.	R. I.	Mass.	N. Y.	Va.	Ore.	Ill.	Wis.	Ky.	N. H.	La.
9	8	1	3	32	48	18	27	24	38	6	11
N. J.	Mo.	Minn.	Vt.	Del.	S. C.	Colo.	Kan.	Ind.	W. Va.	Iowa	
5	15	44	7	2	36	26	19	34	4	40	
Neb.	N. C.	Ala.	S. D.	Miss.	Wy.	Utah	Idaho	Ok.	N. M.	Ariz.	
10	39	43	33	25	29	47	16	35	37	30	
Nev.	Ark.										
20	45										

KEY TO THE BRAILLE MAP OF CITIES

Chi.	San F.	Buff.	N. O.	Dul.	Pitts.	Det.	Port.	Sav.	Phil.	Sea.
29	41	32	11	44	28	12	18, 13	31	28	14
Gal.	St. P.	Bost.	Om.	St. L.	Mil.	N. Y.	Kan.	Los A.	Clev.	Balt.
21	44	3	10	15	24	32	15	41	33	9
Ind.	Louis.	Den.	Cin.	S. L.	Roch.	Mem.	Rich.			
34	38	26	23	47	32	42	48			

INTERPRETATION: If a single grade is tested, the teacher may be interested in making scatter diagrams of the pupils' scores in the tests of states and cities, and tracing across the first diagram a curve based on the scores for the blind presented in Table II following. We have no norms for the test with cities. If a whole school is tested, a series of scatter diagrams and curves is suggested, based on chronological age, age at loss of vision, mental age, intelligence quotient, grade, number of years in school and number of years maps have been used.

Table II

Results obtained in eight schools for the blind with the Courtis map test of states (Highest possible score, 48)

Ages	Number of pupils tested	Median scores	Standards for the blind
10	4	2	3
11	13	5	6
12	21	11	10
13	25	13	14
14	38	19	17
15	39	20	22
16	54	27	26
17	62	31	26
18	40	20	23
19	33	17	21
20	49	25	23
Total	378		

The scores obtained from the use of these map tests were the most scattered and the curves the most irregular of all the data collected in the survey. The results showed little relation to age, grade, or age at loss of vision. In fact 39 of the 55 pupils who scored above 30 lost their vision under five years of age and those born blind, who comprised about one half of those tested, scored equal to the other half. Inquiry disclosed great differences in the use of maps in various schools and grades and this probably explains the wide variation in scores. On the other hand, the high scores occasionally found with pupils blind from birth demonstrate the possibilities of accomplishment when map work is seriously taught. It seems highly desirable that such a test should now be widely used to determine whether our improved methods and aids have produced the results desired. In our survey the curves by age and grade for 378 blind children did not equal a curve based upon one half the standards for the seeing, though occasional blind children with practically no vision made scores quite up to the seeing standards. The writer will be greatly pleased to receive reports of results which can be used to set revised norms for the test of states, and tentative norms for the test of cities.

THE NEW STANFORD ACHIEVEMENT TEST, No. 7, GEOGRAPHY

OBJECT: The purpose of this test is to measure the pupils' knowledge of geography and their ability to use it in an objective test of the multiple-choice completion type.

MATERIALS: From Perkins Institution, order one ink print copy of each of the following—the directions for administering, the key and directions for scoring, and an advanced examination pamphlet for grades 4-9 in one of the five forms V, W, X, Y or Z; and secure enough braille pamphlets of the *same form* to provide one copy for each pupil. Each form of the test consists of 80 incomplete sentences, each sentence being followed by three words, one of which will satisfactorily complete the sentence, as follows:

1. Wool comes from the
   cow hog sheep
2. The earth is shaped most like a
   baseball football pear
3. An important orange-growing state is
   Vermont California Missouri
4. The month before April is
   March May June
5. The largest city of the United States is
   Chicago New York Washington

The sentences are listed in order of difficulty, the easiest appearing at the beginning and the most difficult at the end of the test. These sample sentences have been taken from Form Y. Since there are five equally difficult forms of the test, it is possible to test pupils at the beginning and the middle or end of the year, and in succeeding years, to show progress, without the danger that memory of a former test might vitiate the results of a later one. Norms are established for years and months of age, and for grades and tenths of a grade, so it is possible to check results against standards at any month in the school year. Used test sheets also make very good review material.

METHOD: Say: "Today we are to have a test to show how much you know about geography. Please do not look into the test pamphlet until I tell you to do so. Keep

your hands folded until I give you the signal to start. For this test you will not need a slate, but will draw lines through certain words on the test pages with a pencil I will give you." Pass the pamphlets and the pencils and then say: "Notice the first sentence at the beginning of the pamphlet. It says: 'Wool comes from the—cow hog sheep.' Now, of course wool comes from *sheep,* so take your pencil and draw a line through the word *sheep.* Look at the second sentence. It says: 'The earth is shaped like a—baseball football pear.' The word *baseball* makes the truest sentence, so draw a line through *baseball.*

"There are several pages full of such sentences, with lists of words from which you are to choose. You must do as many as you can, starting when I give the signal. You are to read each sentence carefully and draw a line through the word or phrase that makes the best sentence. If you come to a sentence you cannot do, skip it and go right on to the next. If you drop your pencil or lose your place, raise your hand and I will help you. After we have begun, you must not ask any questions. Are there any questions now? Ready, GO." Record the exact time of starting.

At the end of *25 minutes* say: "All stop for a minute, as I want to mark your pamphlets to show how far you have gone. Please sit with your hands folded." Go around with a *red* pencil and encircle the last word crossed out. Then say: "Now all find the last sentence you worked on and then wait for the signal to go ahead." See that everyone has the right place and then say: "Ready, GO." Record the exact time of starting. At the end of another *10 minutes* say: "All stop and fold your hands." Then collect the pamphlets, making sure that each child's name is on the outside of his pamphlet.

SCORING: Use the printed key to correct the pupils' work and on their pamphlets, under their names, record the scores at 25 and at 35 minutes, omitting the first two sentences used as examples. The seeing are allowed only 10 minutes for this test, but in order to make sure that the tests in the Stanford Achievement series shall measure "power" rather than speed, it has seemed best to give the blind about three times as long. It is hoped that a considerable number of schools will report to the writer their scores at 25 and at 35 minutes, with a table showing how many and which test items each pupil attempted and passed, and other comments, in order that optimal time limits may be determined. For the present it is recommended that teachers use for their own calculations the results at 35 minutes, as this will meet the criticism on the question of speed and allow a larger number of pupils to be tested on the more difficult items at the end of the test. The raw scores obtained from the use of the key should next be transmuted into equated scores by means of the tables at the bottom of the ink print test pamphlet of the same form as that in braille, and these equated scores used in the further calculations.

INTERPRETATION: As we have rather complete norms for this test, teachers will be interested in making a number of scatter diagrams, by chronological age, by mental age, and by grade, and perhaps also by I. Q., by classroom mark in geography, by age at loss of vision, by number of years in school, by reading rate, etc. When arranged by C. A. the curves for one school were fairly regular at the two testing dates and practically equal to the seeing norms for ages 9-15 inclusive, but after the age of 15 attainment dropped rather suddenly; in the other school the curves for both years were quite irregular and showed no clear upward trend from year to year. Teachers may wish to make C. A. curves to see if they obtain similar results, using the seeing standards in the column marked "educational age" in the Educational Profile Chart to be found on page 2 of the ink print test pamphlet; but it is recommended that the results be graphed by *mental* age instead.

In Table III following, we are presenting our results for the first year in two schools arranged by M. A. Considering the small number of cases in each age group in a single school, it is not surprising that the average scores and the per cent of the norms should vary from year to year; but when the two schools are combined we find a pretty regular increase of average score with each year of mental age and such a close approximation to the printed norms for the seeing, that we feel justified in recommending that the seeing norms by C. A. be used with tables of results for the blind assembled by M. A.

Table III

Results, in two schools for the blind, of the Stanford Achievement Test, No. 7, in geography, arranged by mental age

	School A, Tested in Nov. '35				School B, tested in Feb. '36				Two schools combined			
M. A.	Number tested	Av. score	Norms for Nov.	Per cent of norm	Number tested	Av. score	Norms for Feb.	Per cent of norm	Number tested	Av. score	Norms for Dec.	Per cent of norm
19	1	112	119	94	4	121	121	100	5	119	120	99
18	6	105	116	91	8	101	117	86	14	102	116	88
17	9	110	111	99	8	108	113	95	17	109	112	97
16	15	94	104	90	15	96	106	91	30	95	105	90
15	9	89	97	92	7	103	99	104	16	96	97	99
14	18	83	92	90	9	101	93	109	27	88	92	95
13	7	81	86	94	5	93	87	107	12	86	86	100
12	6	67	77	87	6	71	79	90	12	69	78	88
11	16	59	66	90	4	58	69	84	20	58	67	87
10	9	48	53	91	4	57	56	101	13	51	54	94
9	6	38	39	97	5	55	43	128	11	46	40	115
Totals	102				75				177			

When arranging results by grade, teachers may use the seeing standards presented in the column marked "school grade" in the Educational Profile Chart; they should then compare their results with Table IV following, which gives the average scores by grades in the two schools tested in 1935-6. It will again be observed that when the two schools are combined to give larger numbers in each grade, the average scores compare very favorably with the norms for the seeing. The difference in attainment in the two schools is to be explained largely in terms of the difference in maturity of the two sets of pupils; School A having an average C. A. of 12:10 yrs., an average M. A. of 13:6 yrs., and an average I. Q. of 106; while School B had an average C. A. of 14 yrs., an average M. A. of 14:10 yrs., and an average I. Q. of 109:6.

Table IV

Results, in two schools for the blind, of the Stanford Achievement Test, No. 7, in geography, arranged by grades

	School A, tested in Nov. '35				School B, tested in Feb. '36				Two schools combined			
Grade	Number tested	Av. score	Norms for Nov.	Per cent of norm	Number tested	Av. score	Norms for Feb.	Per cent of norm	Number tested	Av. score	Norms for Dec.	Per cent of norm
9	22	101	97	104	9	102	99	103	31	102	98	104
8	18	87	91	95	19	107	93	115	37	97	92	105
7	16	93	84	111	17	103	86	119	33	98	85	115
6	17	76	76	100	12	100	78	128	29	86	77	112
5	13	59	65	91	11	75	68	110	24	66	66	100
4	16	43	52	83	12	61	57	107	28	50	53	94
Totals	102				80				182			

Many interesting questions can be answered through the study of data collected by the use of the Stanford Achievement Tests. The writer has made a number of calculations from the results within single grades, using the simple correlation method described in his article in *The Teachers Forum* for May, 1937, pages 89 ff. Table V gives the resulting coefficients of correlation in a low and in a high grade in each school.

Table V

Correlation coefficients by the rank order method in two schools for the blind

	School A		School B	
	Grade 4	Grade 7	Grade 4	Grade 7
Scores in '35-6 and in '36-7	+.79	+.77	+.71	+.86
Geography 7 and Reading 1, '35-6	+.59	+.37	+.44	+.42
Geography 7 and Reading 2, '35-6	+.68	+.42	+.44	+.30
Geography 7 and I. Q., '35-6	+.49	+.68	+.80	+.64
Geography 7 and Teachers' marks, '35-6		+.62		+.36
Spelling 3 and Teachers' marks, '35-6		+.78		+.71

It will be remembered that in this method of calculating correlation the scores are ranked from highest to lowest in each of the two measurements compared and the differences in rank used to determine the amount of correlation, which may range from +1.00 to —1.00. In the first line of the table we find correlations ranging from +.71 to +.86, which indicate that in the grades examined the pupils maintained much the same rank when retested, those testing high at first tending to be towards the top on the second test, while those who were low on the first test tended to be low on the second. Had the exact order been maintained, we should have found a correlation of +1.00. These correlations compare favorably with the seeing coefficients of reliability and indicate that this test in its various forms is a fairly dependable one. As there are five alternative forms, provision is made for an annual check-up through as many years as geography is commonly taught.

The next two sets of correlations were calculated to see whether one might say that facility in reading would affect the scores in geography, since this test was given tactually. The correlations are all positive and are high enough to show the influence of differences in reading without being so high as to suggest that the reading tests alone would be sufficient without the test in geography. It will be noted that this dependence is most marked in the fourth grade. The first reading test showed the ability of the children to grasp the meaning of paragraphs and use their information in completing sentences based on the reading. The second test was a measure of word meaning, a short statement being given which could be completed by one of four words printed after it. This test was in the same form as the geography test. The correlations show no decided differences between facility in reading as tested by either method, and scores in geography.

Other correlations were calculated by the Pearson Product Moment Method for all the pupils in a school and are presented in Table VI below.

Table VI

Correlation coefficients by the Pearson Product Moment Method in two schools for the blind in 1935-6

	No. of Cases	Cor.	No. of Cases	Cor.
Geography 7 and average of Reading 1 and 2	100	+.81	78	+.80
Geography 7 and Literature 5	100	+.79		
Geography 7 and Physiology and Hygiene 8	103	+.79	75	+.77
Mental Age and total score in Stanford Achievement Tests			76	+.75

It will be observed that when the scores in geography are compared with

the average of the two reading scores, correlations of +.81 and +.80 were obtained. Of course one would expect to get higher correlations with the large numbers involved here, as compared with single grades in Table V, but the high correlations with test 5, literature, and with test 8, physiology and hygiene, both of which are printed in the same form as the geography test and so depend largely upon tactual reading, support our earlier emphasis upon the need of fair reading facility to succeed in this geography test.

Another factor of importance is indicated by the relatively high correlations of geography with I. Q. in Table V, and the correlation of +.75 when mental age is compared with total score in School B, supporting our earlier position that mental age rather than chronological age should be used in curves, since intelligence is so important in all school work

The comparison of scores in geography and teachers' estimates of class work in that subject gives correlations which are somewhat lower than similar correlations in spelling, but both these correlations would have been significantly high if a single pupil in each grade testing above the middle of the grade had not been marked D for class work. In general the ranks in the test support the judgment of the teachers.

Individual students may be studied by the calculation of Geography Quotients and Geography Accomplishment Ratios. The Geography Quotients of children of average I. Q. may be obtained by reading off from the Profile Chart the educational age corresponding to the pupil's equated score, and dividing this by his chronological age; the Geography Accomplishment Ratio, which seems still more valuable, may be obtained by dividing his educational age in geography by his mental age. The Geography Quotient will show whether the pupil is doing as well as a normal child of his age should be expected to do; the Accomplishment Ratio will indicate whether he is making proper use of his abilities. Teachers will also wish to seek explanations for any marked discrepancies between the scores pupils achieve on this standard test and the teachers' marks for daily work, which are brought prominently to our attention through the use of the rank order correlation method. Such discrepancies are sometimes caused by weakness of memory which prevents pupils from retaining over any considerable period what they learn in daily recitation periods, but more often by the fact that the teacher has rated the quality of daily work too high or too low. Excessive shyness, faults of personality, and evident lack of industry are cited as common reasons for unjustly low marks by teachers of the seeing, while exceptionally attractive personality, exemplary conduct and studiousness tend to produce lenient marking.

Our study of the scores of individuals discovered a considerable number of very superior records, 4% in School A and 19% in School B scoring in the first test at least two years above the norms for their mental age. A somewhat larger number of pupils (16% in School A and 20% in School B) tested two or more years below their mental age norms. Many of those getting low scores in the first test showed distinctly higher scores in the second test about one year later, indicating the possibility of improvement through special instruction when motivated by standard tests.

SUMMARY: Three standard tests in geography have been presented with norms for interpretation, and an extended study of the results of the geography test in the Stanford Achievement series. In general, the author would recommend that testing be begun with the use of the last which is an up to date and well-constructed test. But both the other tests are well worth occasional use, partly to check up the results of the Stanford Achievement Test, and partly to get the advantage of a different method of testing information and its use

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DR. ALLEN SAYS: ENRICHING CHILDREN'S VOCABULARY

Said a visitor, "Ever since my talk with Superintendent Hall of the Illinois Institution I have reasoned that if deaf children are poor in language blind ones ought to be superior. Are they?"

No; in that respect our pupils are like other hearing children, good, bad, and indifferent. However, believing that many of them might excel, if properly led on and, borrowing a suggestion from the very Mr. Hall you mention, I tried this experiment with my two young daughters: using a blackboard I chalked in the order of appearance in a fable a bare list of words and expressions to be used as landmarks in its reproduction. Then bidding the girls follow with eyes, ears, and minds my reading aloud of the story as a whole, I asked them to go over it silently to themselves and, as soon as one of them was ready, to tell it to me. Here it is with the landmarks to be listed italicized:

The Dog and his Shadow. One day a dog found a piece of meat. "What *a fine dinner* this will make!" he said *to himself* as he started home.

While *crossing* a pool by a plank, he saw his own *shadow* in the still water beneath him. *Supposing this to be* another dog with another piece of meat, he thought, "I will have that, too."

So he *snapped at* the shadow. When he opened his mouth his meat *fell into* the water. Thus *by being greedy* he lost his dinner.

Of course, from the list, my visitor himself retold the fable readily enough. Whereupon I explained that, after getting a similar result from one of my teachers, she had written the list on the Hall braille writer and on finding that her pupils not only did surprisingly well in the retelling but liked it as a game, she got the school printery to supply enough copies for her class. Since then pamphlets of several such "words and phrases" [1] have been run off and by her used regularly one period a week.

We next visited this class which was enjoying the retelling of "As You Like It," as done in simple language in Lamb's "Tales from Shakespeare."

Naturally our visitor was delighted and, being himself a teacher of English, asked for a volunteer to retell a paragraph of the play, substituting synonymous expressions for those listed. Two of the girls offering to try, each succeeded well enough to prompt our friend to declare that so promising a method of enriching one's vocabulary and of improving one's expression might well be made the most of.

He then suggested practice with Hawthorne's "The Snow Image," and dictated the underscored expressions in its opening paragraphs:

"One afternoon *of a cold* winter's day, when the sun *shone forth* with chilly brightness, *after* a long storm, two little children *asked leave of* their mother to run out and play in the new-fallen snow.

"The elder child was a little girl, *whom,* because she was *of a tender* and modest disposition, *and was thought to be* very beautiful, her parents and other people *who were familiar with* her used to call *Violet.*"

Before leaving the room our visiting friend said encouragingly, "Perhaps one or more of you girls may come to write so well that her stories will be published—just as the blind girl, Frances Browne, succeeded in doing with her *Granny's Wonderful Chair.*

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[1] The Howe Memorial Press publishes a few.

THE CONQUEST OF BLINDNESS
By H. Randolph Latimer
Price, $3.25, postpaid

TECHNIQUE OF PLAY PRODUCTION IN SCHOOLS FOR THE BLIND

Ruby I. Grass

If any teacher ever doubted the need of dramatics in schools for the blind, this doubt would have been dispelled upon reading Miss McGuire's splendid article, "The Play's the Thing," in the November, 1936 issue of *The Teachers Forum*. Now that we recognize the need of dramatics, let us consider the methods and technique of play production with pupils who do not see.

Methods of casting a play have been much discussed among teachers of speech arts. Every teacher has his individual method, and most of these are good. At Overbrook we have found that the "try-out" method is by far the best, both in fairness to the pupils and in the results attained. It is difficult, however, because only the parts with cues are put into braille, making a complete reading of the play by pupils impossible until parts are assigned. To overcome this difficulty the teacher tells the story of the play, reading excerpts here and there, or, if the play is short, reading the whole play. Preceding this she gives a description of each character as to looks (as described in the play), type, and favorite expressions, and mentions anything else concerning the part which will stimulate the imagination of the pupils. The teacher then names a character, describes a situation, gives the speech preceding and reads tonelessly a speech of that character, asking for interpretations. This continues with many speeches for each character until the play is cast to the satisfaction of all. If there is indecision, continued reading and a group vote is a diplomatic way to settle it. You may say that this method takes too much time. It does, but what pupil won't give up many free hours for the chance to be in a play. The cropping up of unexpected talent is one of the greatest thrills of "try-outs."

The first rehearsal of a play follows as soon as possible after the casting. This is merely a reading of the whole play from the braille parts, since it is very confusing to try to learn a speech intelligently with only a four or five word cue. For the second rehearsal, usually held about three days later, a certain portion must be memorized so that play business can begin. A pupil cannot read braille and make gestures at the same time.

Class training in learning direction from sound is a most helpful aid in play production. One pupil speaks to another and the other walks toward him to see how well he can judge distance and direction. This is done on an empty stage or with the furniture out of the way so that fear of bumps is eliminated. Other sounds, such as bells, footsteps, coughs, etc., are also used. In tests conducted at Overbrook it was interesting to learn that the human voice is easier to locate than any other sound. This direction from sound work is done in expression class about once a month, but is encouraged as a game for play time.

The problem of expression in plays is not difficult here because this art is taught in regular class work, beginning in the kindergarten and continuing under a special teacher of speech from the third grade through high school. Every pupil must be enrolled in this course and the voice and expression work in plays is the outgrowth of this thorough training. Where this work is impossible, one simple rule will help a great deal: "Feel the line before speaking, work from the inside out." Lines are never assigned to be imitated. Talk the pupil into the part and then ask questions. Simple questions, such as, "Where did he go?" "What did he do?" will bring the true expression.

Gesturing, one of the most important arts of stagecraft, is the hardest to make natural with our blind pupils. Those who have not

seen from an early age have not acquired freedom of the face and body and do not know the effect of a smile or wave of the hand. They do these things, of course, but ask blind children to smile—the facial contortions are sometimes painful. Try this: Tell something funny, get them smiling, then let them "see" their smiles with their fingertips. Next time they are asked to smile, they know how. Ask a blind child to stand slumped over—the resulting tense, contracted muscles are suggestive of Dracula. Instead, have the child say, "Oh, I'm so tired! If I could just sit down," and a relaxed, slumped posture soon follows. All simple facial, hand, arm, and body gestures are taught in this manner in expression class. The more difficult gestures are taught in play practice, as the occasion arises, with the powers of suggestion leading the way and imitation used only as a last resort.

Before the second rehearsal, the coach must have the stage set and the mats placed. We use strips of stair carpet from each exit to center stage, or to a main object of furniture, with rubber mats over this at the doors, center stage, before the furniture, etc. The direct paths to exits are free of furniture and properties, or are marked by rubber mats. These mats serve as foot guides, doing away with fear and groping hands. The confident, free action produced by their use is remarkable. A slight rise in the Overbrook stage, placed there originally to keep pupils from walking into the footlights, makes it impossible for these mats to be seen by the audience. Sometimes a gasp of surprise greets a difficult bit of business executed perfectly by a totally blind character, and a rubber mat is usually responsible for a turn at just the proper place. The members of some casts do not need these foot guides. Their use depends on the amount of sight of the players, their experience, and their sense of direction. In short plays, the use of mats is very limited. The beginning of the rehearsal must be spent in familiarizing each actor with the set. For every following rehearsal, the placement of furniture and mats must be *exactly* the same. Any later change of the set should be discussed with and made known to each individual character.

Naturalness in handling all properties depends on familiarity, placement, and practice. General props which are movable, such as a telephone, small chairs, newspapers, etc., must be left in the same position each time for the following character. This does not mean that the position of an object cannot be changed throughout the play—it can be, many times. But, if Ned is to pick up a paper from the divan and leave it on the right-hand corner of the desk for Joe's next scene, it must be on the right-hand corner in every rehearsal and not just somewhere on the desk. Correct placement of bells for the door and telephone enables them to serve as sound guides. Put the doorbell on the scenery by the outside door and the telephone bell under the telephone table. If you work with set scenery rather than draped curtains, the use of door knobs is very important. Exits must be repeated until each one can be made with a direct reach for the knob, and not a frantic search all over the door.

The use of personal properties should begin during the second rehearsal or as soon as possible thereafter. Gloves, hats, purses, canes, suitcases, umbrellas, flowers, letters, magazines, and all hand props become a part of the character if used continually, and "blindisms" and awkwardness may be seen and eliminated at an early date.

The outstanding differences in play production with our pupils and those who see are: Our pupils, being accustomed to memorizing, are capable of learning their lines in less than half the time usually taken by those who see; and, on the whole, their expression is better, because of their splendid background in this art; but, in the matter of rehearsals, our pupils need about triple the amount of time usually given, because of the

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ARKANSAS OFFERS OUTSTANDING BRAILLE SERVICE TO THE BLIND

Laura E. Carson

The Sebastian County Chapter, American Red Cross, located in Fort Smith, has had an active Junior Red Cross braille unit, under the direction of Mrs. Frances Gallaher, for the past three years. This group has done much in the way of transcribing. Greeting cards of all kinds, and bits of poetry have been given fingertip passageway into darkened lives so often cheerless. However, due to lack of funds no adult work had been undertaken .

In February of this year, a local benefactor, a truly humanitarian person, made it financially possible by a liberal donation, to organize an adult braille unit, to function as a leisure time activity for the purpose of bringing to the blind in our county, as well as Crawford County (adjoining Sebastian County), reading material which otherwise would not be available. Braille books are quite expensive, and in spite of the work going on under the Red Cross, and the thousands of transcriptions completed each year, library shelves are still all too bare of material for the blind. The books which are transcribed by the adult unit now so beautifully functioning in our county and Crawford, will be placed in a braille section of the Carnegie Library in this city. It is the objective of the person making possible this project, to have this a permanent activity, and in doing this, it is possible for Fort Smith to have the first braille section in a library in this state.

A county-wide survey was made during the spring to determine the number of blind in Sebastian and Crawford Counties, and the number of blind who read braille. So much interest was displayed that it became feasible to begin a small class for the purpose of teaching a number of blind persons never before having had an opportunity to learn braille. At the present time there are nine blind students finding, in their studies, a new way of life opening up before them. Many of these blind persons have been blind since childhood, yet their minds are just as keen and active, and able to assimilate, as a child's mind. They are advancing rapidly, and are being supplied by the transcribing class with teaching material, such as alphabets, words, sentences, and beautifully illustrated primers. Cut-outs are used for illustrations—fingers can "see" these when they are lightly outlined, and this, too, helps to develop the sense of touch which is so necessary.

These blind students are being taught to read by three blind young women of Van Buren, Miss Maulsa King, Miss Eula Peerson, and Miss Marion Blake. Mrs. Harry Shibley, Jr., District Chairman of the State Association of the Blind, living in Van Buren, a nearby city, has lent throughout, splendid cooperation. These three blind teachers are graduates of the State School for the Blind in Little Rock, and are quite versatile. Each of them teaches music, makes beautiful handiwork such as tatting, crocheting, and rugs. Miss Peerson and Miss King have studied voice for some time and have lovely voices. All these persons, in true Red Cross spirit, give most generously of their time to this work.

Mrs. Frances Gallaher, above mentioned, who has been quite active in Junior Red Cross braille classes for some time, is teaching the transcribing class. She has forty-seven pupils. Among these pupils are ten Benedictine sisters, teachers at St. Scholastica Academy, twenty St. Scholastica students, thirteen mothers, church workers, and former teachers, and four negro women. These negro women, upon completion of the transcribers' course, and certification by the Red Cross, expect to begin classes in braille among the negroes who are interested, and also expect to have a group of blind persons,

whom they will teach to read. The transcribing class is progressing quite rapidly in the braille course, sending completed lessons to the Library of Congress for correction, as well as keeping the blind class amply supplied with teaching material. Soon braille-writers will be available.

The Motor Corps Group, a voluntary service of the local Red Cross Chapter, assumed responsibility for transportation of the blind to the classes. This unit has enjoyed the contact which this opportunity for service affords, and, incidentally, several members of the Motor Corps Group have become interested in braille and are learning to transcribe.

During the summer months interest never lagged. Meeting hours were changed from 3:00 o'clock in the afternoon to 9:30 in the morning so that the work might be done in the coolest part of the day. Every Wednesday morning saw the usual earnest, loyal group meeting, having the assembly period of songs and scripture readings and then going into the work of the morning at various tables under supervision.

The cooperation of the Lions Club of Fort Smith has been given to the Chapter from the beginning. The Lions, however, have wanted quite specifically to engage in allied fields of service, rather than to confine their efforts along the lines of braille alone. During the last month, for instance, the Lions Club has become interested in one of our blind teachers, Miss Maulsa King, who was graduated with highest honors from the School for the Blind at Little Rock, a few years ago, and whose ambition was to have the opportunity for further education so that in time she might qualify for civil service. The Lions Club, on being contacted by a Chapter representative, found it possible to furnish a two-year scholarship in junior college, in Fort Smith, to Miss King. Mrs. Harry Shibley, Sr., of Van Buren, the Lions Club of Van Buren, and others interested have worked out carefully a budget for Miss King which will enable her to accept this scholarship with necessary additional grants of assistance made through the kindly cooperation of these other agencies. The college librarian, through the Library of Congress, has received the needed books in braille for Miss King's use. Additional textbooks necessary will be brailled for Miss King by the local Chapter. This opens a new field of endeavor here for the Lions Club. Never before has a blind student attended the junior college but the Lions Club plans now to make this scholarship a permanent part of the local program, provided deserving and qualified students are in need of the assistance.

Mrs. J. Seaborn Holt, Chairman of Volunteer Service of the Sebastian County Chapter, who is a member of the Carnegie Library Board also, assures us that the local library board welcomes the addition of a braille library service for the blind.

Our program for the coming year includes the brailling of books, when the new writers arrive, proof-reading, which will be done by two of our blind teachers who are now taking the proof-readers' course, binding the books and placing them in the library. There will be an organized bookbinding unit in connection with the Chapter work—the Chapter, therefore, completing the volume for the library shelf after it is brailled and proof-read. Effort will be made to provide a teacher at some central point in the lower part of the county, who will once each week hold a class to teach the blind of the county to read.

The Junior Red Cross continues its interest and works in cooperation with the general braille project. Two of their quite versatile members act as pages during the weekly class period, and are of much assistance to the librarian, Miss Gladys Krone, who has charge of supplies. They are also able to assist the beginners with their lessons. The Junior Red Cross plans, during the coming year, to assist in a recreational program for the blind, which it is hoped can be held.

At the time that this brief summary is being written, Mrs. Frances Gallaher, chairman of the project, is preparing to speak at the Annual Roll Call meeting of the American Red Cross to be held in Little Rock on October 14th. She has been asked by the national organization to give a report of the work being done for the blind in Sebastian County.

It is understood that this work is quite outstanding for this section of the country. That it will grow in scope and varied interest cannot be doubted. For instance, recently, several others who were not assisting with the Red Cross program have shown an interest in the possible organization of a Lighthouse. This winter a careful survey will be made in both Van Buren and Fort Smith to determine the practicability of establishing such an institution. This project will not be gone into until it is established that the need is sufficient to warrant the undertaking.

The Sebastian County Chapter, American Red Cross, in Fort Smith will be very glad to be of all possible assistance to chapters elsewhere which are interested in work for the blind. The success of the present project, the Chapter realizes, is due to the splendid cooperation of the Twin City Blind Association, the Lions Club, and other local persons of a humanitarian turn of mind.

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as provided for in the Hahn-Lackey test, and to measure progress in the use of maps by means of the Courtis test. Mention should also be made of another excellent test in geography which has been standardized upon a very large number of seeing pupils, a considerable part of which could be adapted for use with the blind, the Wiedefeld-Walther Geography Test published by the World Book Company. This test recognizes the importance of reading by placing first a test of ability to understand and use passages of geographical information. Test 2, "Organization," seeks to measure the pupils' ability to give causes and reasons for geographical phenomena. Test 3 measures ability to read maps and graphs and could be used with the blind only in greatly modified form, if at all. Test 4, "Geography Vocabulary," and test 5, "Geographical Relationships," could easily be adapted for the use of the blind. Test 6, "Place Geography," reminds one of the Courtis Map Test, but besides a map of the U. S. it uses a large map of the Americas, a map of Europe and a map of the eastern hemisphere, all of which might be used with the blind.

(An annotated bibliography of articles on geography for the blind has been compiled by Helga Lende, librarian of the American Foundation for the Blind.)

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difficulties of gesture work and stage business. Patience is a virtue in any field, but patience is a necessity to a dramatic coach in a school for the blind. Most rehearsals are held during free time, hence, should be play instead of work. The members of a cast can produce a better play if it's fun to do it, and they enjoy rehearsals. Sometimes a bit of action must be tried again and again. It is then that the attitude of play will give the pupils more freedom on the stage, as a laugh will relieve many tense muscles and make the next attempt easier.

As Miss McGuire says, "The Play's the Thing," and the individual training in everyday manners, gestures, and situations taught in the play way will help make our boys and girls polite, natural, fun-loving, free, imaginative citizens, better fitted to take their proper places in our seeing world.

Thirty-three per cent of the Nation's adult population have at least entered high school; fourteen per cent have graduated from high school; seven per cent have attended some college, and three per cent have graduated from college.

MUSIC IN THE SIGHT SAVING AND BRAILLE CLASSES OF MINNEAPOLIS PUBLIC SCHOOLS

LUCILLE L. JOHNSON

Music has long held a legitimately prominent place in the education of visually handicapped children. Being deprived of many of the diversions open to children of normal vision, these children find in music a leisure-time activity, a recreation which is invaluable to them. In the Sight Saving and Braille Classes of the Minneapolis Public Schools opportunities for music training and participation have been developed to an extraordinary degree. This has been due largely to the inspired and enterprising spirit of Mrs. Florence Henderson, the teacher under whose guidance the music has for eight years been carried on, and to the understanding and ambitious support of George F. Meyer, former Supervisor of the Sight Saving and Braille Classes.

Although fine equipment may not be indispensable, it is certainly an important contributing factor to the success of any undertaking. The judicious care with which materials have been added through the years to the music department has resulted in a finely equipped library, an adequate instrument collection and an interesting supply room. May we not be proud of a library containing two thousand copies of clear-type music, all of which has been copied by hand on durable paper, with the size of notation enlarged to three times that of the average ink print music, and including solo and ensemble numbers for piano and voice, as well as wood-wind, brass, string, and percussion instruments! In the braille library there are several hundred compositions for piano, voice, violin, and organ, in addition to music texts. Large black and white sketches of famous composers and of musical instruments are clearly and easily discernible. A cabinet containing recordings of three hundred of the world's greatest masterpieces of music is of inestimable value in the music appreciation classes. Rhythm band instruments and large colored balls are supplied for rhythm work in the grades. For those children whose ambition it is to play some instrument other than the piano and who cannot afford to buy the instrument of their choice, a constantly increasing number of instruments owned by the department is provided.

Special attention has been given to providing every possible opportunity for braille music students. Cut-out notes of every existing note value give these children a clear concept of the shape of ink print notes. A "Notation-Graph" is loaned for a month or more at a time to high school pupils in order that they may be prepared to meet the requirements of the department that all braille music pupils graduating from high school have a comprehensive knowledge of ink print music notation.

The braille students are encouraged further to become proficient braille music readers by means of a series of card games comprising all braille music symbols. As a result of their work in music, the children in these classes often find that they have gained one more means whereby they may make a definite and frequently valuable contribution to society. Programs which grow out of the work done in music classes are given at school assemblies. Children who are receiving individual instruction on any instrument appear on such programs. In some schools the appearance of the Sight Saving and Braille Class in a school recital has become an enthusiastically anticipated tradition. Participation in school orchestras, bands, and glee clubs is encouraged and made possible through the facilities of the department in providing large type and braille copies of the necessary music. Frequent appearance in recitals in the dignified atmosphere of one of the city's fine hotels develops in the children a charm and ease in

public performance which dispels the uncertainty and awkwardness so often associated with faulty vision.

Further along the avenue of opportunity for social contribution are the openings which come to members of the Giovanni Music Club — an organization which is a direct outgrowth of the music work in the department. Membership in this club is of three types: active, alumni, and honorary. Active membership is open to high school children of the department who have attained a certain degree of excellence in musical accomplishment. Monthly dinner meetings and musicals provide opportunity for frequent performance and criticism. An artist bureau keeps a list of members who are prepared to appear on programs in answer to requests from other organizations of the city.

The classes of the department are located in twelve different schools of the city. Since the grade school classes often include children from the first through the sixth grades, it has been necessary to devise a plan of music study for class work which is flexible enough to permit each teacher to adapt the plan to the use of her group. A system of music units has been worked out in which each unit is based upon the music of a certain country and covers an outline of work for a six weeks' period. Among the unit titles are included, for instance, *a German unit, a Scandinavian unit, a Hungarian unit, an Italian unit,* and *an Indian unit.* With each unit as it is sent to a school is a complete set of textbooks containing stories of the music and the composers of the country being studied, song books, phonograph records, rhythm books, and a guide for the study of notation, as well as a notebook containing an outline of the work to be covered in the unit.

During the weekly visit of the music teacher, she observes the work that is being done and frequently conducts the class and makes suggestions and recommendations. Each school is allowed either a whole or a half day in the weekly schedule of the music teacher, whatever amount of time is necessary to hear the class work and to give individual instruction on various instruments to those children who are sufficiently talented and interested to warrant their being given this privilege. In the junior and senior high schools music appreciation classes and harmony classes are conducted by the music teacher, and the plan of individual instruction is the same as that followed in the grades.

The promise for the future is bright in these Minneapolis classes, if it is true—and surely it is—that "the promise of the future lies in the richness of the past."

THE TEACHERS FORUM
for
Instructors of Blind Children

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November, 1937

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CURRENT TRENDS IN JUNIOR HIGH SCHOOL PRACTICE IN THE PUBLIC SCHOOLS

CLARENCE R. ATHEARN, Ph. D.

Editor's note: The following article was prepared by the author as a report to the principal and staff of The New York Institute. It was not originally intended for publication, but I believe that it contains ideas which will be interesting and helpful to superintendents and teachers in other schools.

1. The futility of standardization by state and college accrediting agencies is being recognized. Schools are protesting against "wooden shackles."

2. The modernization of the curriculum looks toward a greater degree of integration of separate subject matter fields.

3. Greater emphasis is being placed on pupil personnel programs of orientation, and upon guidance as a definite course in the time schedule.

4. There is a utilization by the school to a larger degree of community resources; a greater integration of school work with the actual life of the community.

5. A shift of emphasis has occurred from the purely disciplinary subjects toward the practical subjects. The aim is to find out what people need in order to be successful in life, and formulate courses to supply the required training.

6. Courses of study in many schools are based on the social, industrial, and economic conditions of fifty years ago. They should be revised in the light of modern needs. (This is equally true, perhaps more true, of schools for the blind.)

7. Two principles govern the selection of courses in the junior high school years: (1) continuity (the constants or core curriculum); (2) variety (the electives or exploratory courses).

8. The constants or core curriculum.

Surveys of general practices show the following subjects as constants: English, mathematics, health, science, social studies, industrial arts, home economics, and music. In each of these fields a progressively organized series of courses should run through the seventh, eighth, and ninth grades, as follows:

SIX CONSTANTS IN CORE CURRICULUM OF 7th, 8th AND 9th GRADES

(1) Health	(7) Social activities
(2) English	
(3) General mathematics	
(4) Social studies	
(5) Natural science	(8) Guidance
(6) Fine and practical arts	

Progressive practices in New York State in each of these fields is detailed in a Regents' report on "Courses of Study and Curriculum Offerings in Junior High Schools in New York State."

(1) *Health Education* is coming to be regarded as a major subject in the core curriculum. Physiological development in early adolescence demands a greater amount of time devoted to health instruction and physical education during this period. (The report recommends the projects in health education at Long Beach, N. Y.)

(2) *English.* The Regents' committee recommends the revision of the organization and method of presentation of the junior high school course, to eliminate repetition and lack of coordination between grades. (The modified Dalton Plan as developed at the Scarsdale (N. Y.) High School is described and recommended.)

(3) *General Mathematics.* The Committee recommends that "general or unified mathematics should displace in time the older type of arithmetic text in grades seven and eight, and the algebra of grade nine." General mathematics is an introductory course in which the simple elements of arithmetic, algebra, intuitive geometry, and numerical trigonometry are taught so as to

show their relations and practical applications. This course has been approved and a syllabus issued.

(4) *Social Studies.* Separate courses in geography, history, and civics is the general practice. A few cities (as Rochester and Albany) have integrated courses in general social science which point the way toward future developments.

The social studies units issued by the Society for Curriculum Study should be put into braille for use in the seventh or eighth grade. At present we give two years to U. S. history. One year might well be given to these concrete, experience-enlarging units in social problems, as housing, clothing, food, transportation, recreation, our constitution, etc.

(If we could persuade the American Printing House to put these into braille it would be a service to all schools for the blind.)

(5) *Natural Science.* General Science is commonly offered in the ninth grade with a trend toward extension into the seventh and eighth. Physiology and personal hygiene take up about two-thirds of the space in the average biology textbook.

(6) *Practical Arts* comprise the commercial, industrial, and home economics courses.

Junior business training and typewriting are being more frequently offered in the junior high schools. The business training course in the junior high schools of New York City is recommended.

Woodworking, home mechanics, and electricity are the most popular industrial arts courses. Practical arts programs for boys as developed in the White Plains and Jamestown schools are described as embodying desirable features.

Cooking, sewing, home management, home hygiene, and care of the sick are most popular courses in practical arts for girls. (The home-making course in the junior high school at Yonkers, N. Y., is described in detail.)

Fine Arts: Music. In addition to the usual aims of music instruction, the following are recommended: To make music more of a socializing force in the school; to provide healthy recreation and serve as an emotional outlet; to produce intelligent consumers of good music; to create a good school atmosphere; to promote good school citizenship; to remold the emotionally maladjusted pupil rather than simply to refine talent and skill.

(7) *Social Activities* parallel each of the major constants of the curriculum, with the aim of providing opportunities for expression and the carrying over of instruction into life. Clubs of all kinds are organized in connection with each of the basic subjects. In many junior high schools this club work is granted regular school time and credited as laboratory work.

(8) *Guidance.* The New York State Syllabi in Educational Guidance recommend that this should be a required course in junior high school and elective in the senior high; that it should be allotted two periods per week for one year; or given for one semester during each of the three years of junior high school.

JUNIOR HIGH SCHOOL CURRICULA IN FOURTEEN AMERICAN CITIES

CONSTANTS—AVERAGE MINUTES PER WEEK ALLOTTED TO EACH

Subject	*Grade*		
	7	*8*	*9*
English	321	274	282
Composition	82	80	89
Grammar	83	63	49
Reading and literature	117	100	118
Spelling	39	31	26
Hygiene	45	41	41
Physical education	111	116	124
Home economics	227	178	283
Algebra	53	104	216
Arithmetic	192	165	175
Geometry	90	75	85
Agriculture			
Gardening			
General science	143	178	195
Nature study			
Community civics	103	124	132
U. S. history	216	170	
Vocational civics	53	111	93

ELECTIVES

NUMBER OF CITIES OFFERING EACH IN EACH YEAR

Subject	*Grade*		
	7	*8*	*9*
Commercial education	6	10	13
English	1	1	2
Home economics	5	8	13
Industrial arts	7	9	13
Mathematics			5
French	4	8	12
Spanish	5	5	8
Music	13	10	11
Science	2	1	8
Social studies			10

SUBJECTS OFFERED AS ELECTIVES

Seventh Grade

Business arithmetic, 2 cities
Business writing, 2
Business forms, 1
Stenography, 1
Typewriting, 6
Clothing, 4
Foods, 4
Home and family, 2
Textiles, 1
Cafeteria, 1
General shop, 1
Metal work, 2
Printing, 3
Reed work, 1
Woodworking, 4
General science, 1

Eighth Grade

Bookkeeping, 2
Business arithmetic, 2
Business practice, 3
Business writing, 2
Commercial geography, 1
Elements of business, 1
Stenography, 1
Typewriting, 8
Clothing, 8
Foods, 7
Home and family, 4
Millinery, 2
Textiles, 1
Art needlework, 1
Auto mechanics, 2
Bookbinding, 1
Cafeteria, 1
Electricity, 7
Home mechanics, 2
Machine shop, 2
Metal work, 4
Reed work, 1
Wood finishing, 1
Woodworking, 4
Elementary physical science, 1

Ninth Grade

Bookkeeping, 10
Business writing and spelling, 5
Commercial arithmetic, 4
Commercial geography, 1
First lessons in business and office practice, 2
Stenography, 4
Typewriting, 9
Clothing, 13
Foods, 10
Home and family, 7
Millinery, 2
Textiles, 1
Art needlework, 1
Auto mechanics, 1
Cabinet making, 1
Cafeteria, 1
Electricity, 4
Home mechanics, 2
Machine shop, 3
Metal work, 5
Printing, 6
Woodworking, 10
Botany
Biology
Physiology
Ancient history, 3
Political civics, 1
Community civics, 2
Current events, 1
Current world history, 1
Economic civics, 1
European history, 2
International relations, 1
Roman history, 1
Vocational civics, 1

Summary and Recommendations

Among the current public school practices which may contain some suggestions for the work at The New York Institute for the Education of the Blind are the following:

1. To meet the Regents' requirements as to guidance courses, units in educational guidance and orientation should be worked out for the fourth grade and seventh grade; and vocational guidance for the ninth grade and later high school years. Having these courses in the earlier years should supply some motivation to school work and thus help overcome the characteristic "indifference" and "apathy."

I would suggest that these orientation units be especially adapted to the needs of the blind. The biographies of successful blind people, the mental attitude toward the handicap, and *The World I Live In* might be some of the applied topics.

2. The tendency toward general courses covering a number of related subjects supplies motivation, and at the same time relieves pressure on an overcrowded curriculum. We are already offering general science.

The advantages of courses in general mathematics, general English, and general social science are sufficiently great to warrant consideration of this type of organization for the junior high school grades.

3. There should be an effort toward homogeneous grouping on the basis of ability levels. The Regents' Report recommends the Albany Plan of grouping pupils according to A-B-C-D levels of ability; the "D" group being the low mentality group.

The following table and chart give a picture of the ability groupings at The New York Institute according to educational quotients:

DISTRIBUTION OF PUPILS IN THE UPPER SCHOOL ACCORDING TO E. Q.'S, I. E., ACCORDING TO EDUCATIONAL RETARDATION OR ACCELERATION

E. Q.'s	Years Retarded or Advanced	Number of Pupils
50-74 Ungraded classes	3½-8	18 Moron level
75-84	2½-3½	23 Borderline
85-94	1½-2½	26 Dull
95-104	6 mo. retd. 6 mo. advd.	32 Average
105-114	Advanced	11 Bright
115-124	Advanced	4 Very bright
125-149	Advanced	3 Superior
Unclassified		5

It will be noted that we have 67 pupils below average, and 50 pupils average and above—more pupils below average than above.

At present, our curriculum is gauged to the educational abilities of the 18 superior pupils, and does *not* adequately meet the needs of the 67 retarded pupils.

With the majority of this retarded group the physical, social and emotional problems of adolescence loom so large that it is impossible to do acceptable educational work on a purely academic basis, without taking these larger human needs into account. It is a situation which violates the psychological principle of learning readiness. One cannot expect a youngster of this age to be sincerely interested in formal learning when he is suffering from emotional maladjustment due to blindness and its attendant anxiety, added to the usual emotional and physical changes at this period.

As a remedy for this situation the Regents' Report recommends more homogeneous grouping on the basis of personal abilities and needs.

In the case of those severely retarded academically for their physiological age, it would seem that the adoption of general methods for slow-learning groups should be considered.

Many units of study and activity for slow-learning groups have been worked out. A study should be made of these with a view to adapting them to the needs of retarded blind students.

4. Greater emphasis should be placed on practical arts, especially for retarded and slow-learning groups. School work is being organized around home mechanics, home management, junior business courses, radio and auto mechanics, etc. These courses occupy the center of the curriculum for these groups. Units should be built up showing correlations of practical arts and the tool subjects, with practical arts furnishing the central motivation.

An example of such correlation might be a unit in "the weaving of Italian tapestries."

The activity and art of weaving itself would be central; correlated with it would be: The Italian language, business corre-

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MNEMONIC DEVICES

SAMUEL P. HAYES, Ph. D.

Editor's note: In the translation of Friedrich Zech's chapter on the importance of memory in the education of the blind, we find the author cautioning teachers that "artificial helps, for the impression of names and the location of geographic data are of value in the education of the blind only when they are purely acoustic and free from mnemonic artificialities," giving some examples of acoustic devices of which he approves. Dr. Hayes now offers us a short history of mnemonic devices which should be valuable to teachers in their class work and which may protect them from the high pressure salesmanship of commercial memory systems.

Mnemonics is the general name applied to devices for aiding the memory. Among the most famous examples of mnemonics in metrical form are the gender rhymes of the Latin grammar, the hexameter lines invented by logicians—Barbara celarent - - -, etc.—and the verse for remembering the days of the month, "Thirty days hath September, April, June and November."

The date of the first memory system is probably prehistoric; at any rate, it is lost in the mists of antiquity. We know, however, that mnemonic devices were cultivated by the Greek Sophists and other philosophers, and that the Romans made practical use of such devices in public speaking. A system in great favor among both Greeks and Romans was based upon the use of mental places and signs or pictures, known as "topical mnemonics." In the Encyclopaedia Britannica, 14th Edition, we read, "In accordance with this system, if it were desired to fix an historic date in memory, it was localized in an imaginary town divided into a certain number of districts, each with ten houses, each house with ten rooms, and each room with a hundred quadrates, or memory places, partly on the floors, partly on the four walls, partly on the roof. Thus if it were desired to fix in the memory the date of the invention of the printing press (1436), an imaginary book, or some other symbol of printing, would be placed in the 36th quadrate or memory place of the fourth room of the first house of the history district of the town."

It is said that Mark Twain used a similar method. Before giving an after-dinner speech, he would suddenly fall silent, look vacantly into space and begin fingering the different spoons, cups, and glasses which were near him. He was really outlining his speech, point by point, and intentionally forming an association between each topic and some article on the table which might represent it.

The first important modification in mnemonics seems to have occurred about the fifteenth century, when *letters* of the alphabet were used instead of *places,* to carry the associations. A well-developed system of this sort was quaintly described as follows by Richard Gray in 1790, in a book entitled "Memoria Technica":

"To remember anything in history, chronology, geography, etc., a word is formed, the beginning whereof, being the first syllable or syllables of the thing sought, does, by frequent repetition, of course, draw after it the latter part, which is so contrived as to give the answer. Thus, in history, the Deluge happened in the year before Christ, two thousand three hundred forty-eight; this is signified by the word *Del-etok,* 'Del' standing for Deluge, and 'etok' for 2348."

Systems of this sort have been called "letter and figure codes" and they are frequently used in public exhibitions by memory experts who astound the audience by the enormous numbers of items they are able to retain. "By means of these systems," says William James, in his Psychology I, page 668, "it is often possible to retain entirely disconnected facts, lists of names, numbers, and so forth, so multitudinous as to be entirely unrememberable in a natural way. The method consists usually in a framework learned mechanically, of which the mind is supposed to remain in secure and permanent possession. Then, whatever is to be remembered is deliberately associated by some fanciful analogy or connection with some

part of this framework, and this connection thenceforward helps its recall. The best known and most used of these devices is the figure-alphabet. To remember numbers, e. g., a figure-alphabet is first formed, in which each numerical digit is represented by one or more letters. The number is then translated into such letters as will best make a word, if possible a word suggestive of the object to which the number belongs. The word will then be remembered when the numbers alone might be forgotten." James quotes from E. Pick, *Memory and its Doctors,* 1888, as follows:

"The most common figure-alphabet is this:

1,	2,	3,	4,	5,	6,	7,	8,	9,	0
t	n	m	r	l	sh	g	f	b	s
d					j	k	v	p	c
					ch	c			z
					g	qu			

To briefly show its use, suppose it is desired to fix 1142 feet in a second as the velocity of sound: t, t, r, n, are the letters and order required. Fill up with vowels forming a phrase, like 'tight run' and connect it by some such flight of the imagination as that if a man tried to keep up with the velocity of sound, he would have a tight run. When you recall this a few days later great care must be taken not to get confused with the velocity of light, nor to think he had a *hard* run which would be 3000 feet too fast." The last line indicates the possible tragedies resulting from a minor slip in a mnemonic system.

The third variation in mnemonics is what we may call the "word-picture code." To quote Dr. Pick further:

"Let us suppose that we are to retain the following series of ideas: garden, hair, watchman, philosophy, copper, etc. . . . We can combine the ideas in this manner: *garden,* plant, hair of plant, *hair; hair,* bonnet, *watchman; watchman,* wake, study, *philosophy; philosophy,* chemistry, *copper;* etc., etc."

Another memory expert tells us that this system can be helpful in learning a foreign vocabulary. For instance, if we wish to associate "head" with the French word "tete," we say "tete, potato, root, head," head being the opposite of root. It may be a little hard to see how the system helps in making this simple association. Pictures are sometimes used by imagining a series of simple events in which objects one and two are seen in one picture, objects two and three in the next, objects three and four in the next, and so on. Having developed and committed to memory a definite series of pictures, each leading to the next, one can then associate with the pictures a list of terms, or dates, or names. The well-learned code of pictures will carry the disconnected items we wish to retain.

The fourth type of device, based upon rhyme and sound associations, is perhaps more familiar than some of those already mentioned. We may remember the lines of the treble clef, e-g-b-d-f, by the mnemonic, "Every good boy deserves fun," and the spaces of the treble clef, f-a-c-e, by the word they spell. In the bass clef the spaces, a-c-e-g, may be translated, "All cows eat grass," and the lines, g-b-d-f-a, "Good boys do finely always." Medical students are helped through their examination by the old verse, "On old Olympus tufted tops, a fat old German picked some hops," each word beginning with the same letter as the name of a cranial nerve.

The attitude of the psychologist toward memory systems is presented in most interesting form by H. T. Adams, under the engaging title, *Psychology Goldbricks,* in Scribner's, 1921. The psychologist makes no objection to mnemonic systems as an amusing pastime, but he questions both their scientific and their commercial value. The common claim of those advertising a memory system at so much per lesson, that they possess secrets by which the memory can be improved, is certainly not justified. The "secrets" can be discovered in any good library,

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WORK FOR THE BLIND IN GERMANY

MERLE E. FRAMPTON, Ph. D., LL.D.

Are you going abroad? If so, you should not fail to see the work which is being done for the blind in other countries. A visit to a few schools and workshops in Europe will broaden your horizon, teach you how little you know about your own professional field and instill in you a close kindred feeling with those hundreds of devoted teachers in foreign lands whose lives are being given in service to the blind. Of the eleven countries I visited, I found the German schools and institutions on the whole better organized and equipped, and ranking with the Swedish schools in progressive methods. Splendid work was observed in all schools, but the total picture of organized work for the blind in Germany merits our first consideration.

The institutions, facilities and associations for the German blind may be divided into four main groups: (1) The German institutes for the blind; (2) associations caring for the blind; (3) self-help organizations; and (4) organizations for the war blind.

Group 1—The Institutes

There are twenty-seven institutes or schools for the blind in Germany; one of which, in Berlin-Steglitz, is operated by the state. The others are mainly country or provincial institutes; only three of them are private institutions and belong to group 2. The principal object of the German institutes for the blind is the education of the blind child and his training in the many occupations suitable for the visually handicapped. There are institutes for the blind in: Augsburg, Berlin (two), Breslau, Chemnitz, Düren (Rhineland), Friedberg i.H., Gotha, Halle a.S., Barby/Elbe, Frankfurt a/Main, Hamburg, Hannover-Kirchrode, Heiligenbronn-Oberndorf a.N., Ilvesheim near Mannheim, Kiel, Königsberg i.Pr., Munich, Neukloster i.Meckl., Neuwied, Nüremberg, Paderborn, Soest i.W., Stettin, Stuttgart, Wiesbaden, Würzburg.

Group 2—The Associations

The main purpose of the associations caring for the blind is to assist in placing the blind young men and women who have graduated from the institutes. The main work of these organizations consists in furthering craftsmen. Such associations caring for the blind are, for the most part, annexed to institutes for the blind.

Group 3—Self-Help Organizations

The most important self-help organization in Germany is the German Society for the Blind. This Society is an endowed organization. It was founded in 1912 and consists of twenty-five national and provincial associations, or branches. Its main object is the furtherance of the education of the blind, caring for their vocational training and placement and working for the general welfare of the blind. Its field is the German Reich. The objects and provisions of the German Society for the Blind are intended for all the German blind. As the associations caring for the blind originally cared principally for the blind graduated from the respective institutes, it became necessary to extend their service to all the blind residing in Germany. This service is now reaching all the German blind.

The Society has its central office in Berlin SW 61, Belle-Alliance Street 33. In Wernigerode in the Harz Mountains, Amelungsweg 6/8, they have a home for the education of those who have lost their sight late in life. This has become a rest home. The Society maintains a rest home in Timmendorferstand/Ostsee which is open from May until the end of September. The rest home for the blind in Bad Oppelsdorf near Zittau i.Sa. is operated only during the summer months. The rest home for the blind on the Kniebis, near Freudenstadt in the Black Forest is open in winter, and is used for skiing activities. The Society has put its home for the blind in Wertheim on the Main

at the disposal of the Association of German Blind Women, with which it is associated. This Association has there its central office for manual arts and teaches different vocations suitable to women and girls, especially knitting. All five homes of the Society have a total capacity of two hundred beds.

In Dresden-N.23, Moltkestr. 7, the German Society for the Blind has a factory for manufacturing technical and mechanical aids for the blind. This factory supplies, in the first place, the German blind and also the blind in other countries. Writing tables, typewriters, clocks, toys and books are among the many things made. This Society has the agency for the Picht typewriter and for the shorthand machine. To America it exported last year three hundred of these typewriters.

The German Society for the Blind issues many publications in braille—ten periodicals, braille music and books. These are printed in the print shop attached to the home in Wernigerode. It has the only rotary press for printing braille in Germany.

The provision of work and vocational placement for the blind is the principal task of the Society and its co-ordinated organization. This work is taken care of to a large extent by the Blindengenossenschaft e.G. M.b.H., Heilbronn on the Neckar, Mozartstr. 16, with which organization the Society works in close cooperation. The Blindengenossenschaft employs about two hundred blind workers with a yearly sale of one million reichsmark. It is headed by a blind manager, Director Karl Anspach, who has been able to obtain the leadership for the trade in articles for the blind in southern and southwestern Germany.

Germany has two large central libraries for the blind carrying only books printed in braille, i.e., The German Central Library for the Blind in Leipzig C 1, Taubchenweg 23, with about 25,000 volumes, and The Central Library for the Blind in Hamburg 21, Adolphstr. 46, with about 45,000 volumes. They are lending libraries and mail their books to the German blind.

One of the most important institutions for the education of the blind is The Library for Higher Learning, Studies and Consultations for Blind Students (Blindenstudienanstalt) in Marburg/Lahn, Worthstr. 9/11, under the management of its capable blind director, Dr. C. Strehl. This institution is supported by the national and Prussian state authorities and is also financially assisted by the Association of Blind Academicians. As indicated by its name, it is first of all a voluminous library for higher learning in braille, which was originated by Dr. Strehl. It consists of 20,000 volumes of works of a scientific character and supplies blind students with the necessary material for their studies on a collegiate level. This library is continually being enlarged and kept up to date. The study plan of this institute is a school developed into a "reform gymnasium," where the blind students are given the opportunity to graduate with the *Abiturium.* The school is connected with a students' home, where everything is provided for blind students studying in Marburg.

The work of Dr. Strehl is notable. His superb volume, *Handbuch der Blindenwohlfahrtspflege,* is a valuable contribution to world literature on the blind, and the many examples of progressive methods of the education of the blind are valuable additions to this field. American visitors to the New York Institute for the Education of the Blind may see a small display of some of the work of this splendid school. Professor Strehl ranks among our world leaders of the blind.

The Association of Blind Women in Germany maintains, as mentioned above, a home in Wertheim on the Main. This organization endeavors to provide blind girls and women with sewing and knitting work, thus assisting them to obtain a steady income.

The German efforts to aid the blind are varied in their aims and provisions; on the other hand, their endeavors are productive

of much valuable aid to workers for the blind in all fields. The diligent work which is being done everywhere is conducted under modest circumstances, however beneficially it works out for the large number of the German blind.

I would recommend especially inspection of the largest institutions for the blind, such as Chemnitz, Halle, Berlin-Steglitz, Breslau, and Hanover. In connection with the Governmental Institute for the Blind in Berlin-Steglitz, there is a museum for the blind, which is world-renowned for its complete and valuable collection.

I also recommend careful study of the libraries for the blind in Leipzig and Hamburg, in addition to the Institute for Higher Learning for the Blind in Marburg/Lahn. Concerning the matter of self-help, I wish to mention the German Society for the Blind with its central office in Berlin SW 61, Belle-Alliance Street 33; also the rest home and vocational school for those who have lost their sight late in life in Wernigerode in the Harz Mountains. The beautiful location of this home near the forest in the Harz Mountains makes a visit long to be remembered. To see a model factory, one should visit the Blindengenossenschaft e.G.M.b.H. in Heilbronn a.N.

The organizations for the blind do excellent work in placing the blind in trades and industries. It would certainly be of interest to visitors to become acquainted with the provisions made for the blind in the Siemens-Schuckert works in Berlin-Siemensstadt, which organization employs about fifty blind workers in its department of electric motors. This concern employs blind workers in other branch factories also. Robert Bosch, in Stuttgart, the shoe factory of Salamander, and numerous cigarette factories give employment to blind workmen. In Berlin, there are about two hundred blind stenographers employed in government and private offices. They received their training largely at the Vocational School for the Blind, a department of the Silex Commercial High School in Berlin. A visit to this school is highly recommended.

Group 4—The Organization for the War Blind

The Organization for the War Blind is a sub-division of the National-Socialist Organization for the Care of War Victims. It consists exclusively of the war blind, who have a club house, the Adolph Hitler House for the War Blind, in Berlin SW 61, Wilhelmshohe 18, in the neighborhood of the German Society for the Blind. In this house is also the office of the Organization for Assistance for the Employment of War Blind Craftsmen. They have over the whole country five other rest homes located in Swinemünde, Braunlage in the Harz Mountains, Bad Pyrmont, Salzhausen and Söcking on the Starnberg Lake.

The work of Pastor Kleinman and his associates at Oberlinhaus in Potsdam should not go unnoticed. In fact, some of the finest teaching I observed anywhere in Europe, Africa, England or America is being done by this devoted group of workers. The special blind-deaf department, the only one of its kind in the world, is unique and in itself worth a trip. The fine work being done for crippled children can hardly be duplicated anywhere, save in America, and the excellent hospital represents the latest in medical equipment and service. This school has received far too little recognition, both at home and abroad, for the splendid task it is performing with the children entrusted to its care. An interesting description of the work of this school can be had in the publications, *Das Oberlinhaus* and *Die Taubstummblinden* by Th. Hoppe.

One leaves Germany with a feeling of regret that the time allotted for the tour of these special schools is so short. A whole year could be spent in studying methods in these schools and organizations, with much profit to workers for the blind in the United States, who are apt to minimize the contributions of our German friends.

DOCTOR ALLEN SAYS:

"The force of the habits of early education is a power, as well as that of inherited tendencies."

G. Stanley Hall once said that the old-time New England country life supplied the growing boy about the best educational environment ever realized in history. My own nurture came at a later and easier period, yet demanded not a little that was good for me, and influenced later the refashioning and conducting of two institutions for blind youth.

I had been born and bred in a New England village where the Allen brothers kept a small four-family boarding school in which discipline was a means, personal character and acceptability, the end. Conditions were still somewhat primitive and contributory: e. g., every boy had to pump up into a cistern the water for his own Saturday night bath. Summers I helped in the hay field and in the kitchen garden; winters, whenever we kept no hired man, my brother and I had the barn chores to do twice a day (horse, cows, pigs, and hens), while our fellow pupils had forty-five minute study periods before breakfast and supper.

Ours was a one-session school, that on Saturday being to prepare lessons for Monday and to make up possible delinquencies. When I was four years old I was sent to our kindergarten, probably the first in America, then to our model school where we children learned largely through playing and through drawing, painting, and modeling, the modern "doing and making." I was a shy boy, self-depreciating, very sensitive and tender-hearted; always an indifferent student, learning more that was worth while at home than at school. Nature and its manifestations were my favorite teachers, our brook and woods an unending joy. The keeping of poultry and of bees were with tree culture my hobbies then and always.

Grandfather Allen, a farmer, had been a Garrisonian abolitionist. Group pictures of Champions of Freedom hung on the walls of our home. Father often told of these people, also of Dr. Howe and of Laura Bridgman and of a blind boy sent from Perkins to the Allen school who had excelled there all his mates in mathematics. During meals, father talked delightfully. I can still recall many of his anecdotes and the lessons they conveyed. They left a deep impression on us all. I must have gained from them and his example my life-long dislike of tobacco, of scattered litter, of waste of any sort, and have fixed the habits of frugality. "A penny saved is two pence earned" is a golden maxim for an adulthood of blindness. Prudence and the habit of looking for the good in people and in things is a happiness bringer to anybody. I loved to listen to my father's reading of Dickens evenings, and from the Bible Sunday mornings, and to read aloud with my mother chiefly in the prose and verse of sentiment.

As I review it now mine was a happy boyhood of simple rural occupations, mostly voluntary, under noble leadership. Such responsibility as fell to me I met loyally and cheerfully. Long visits from elderly relatives taught me respect for age; the presence of a younger brother, and sisters; generosity, tenderness, and care. We had no feeling of caste; high and low were alike to us. An emancipated slave, "Uncle Tom," served us long as hired man and his children were among my playmates.

Those persons who know intimately Overbrook and the Perkins of Watertown can see how the boy's nurture I have outlined served to color the man's teaching, to shape the two environments he created for his staff and for the education of his pupils, and to build his own precepts and example.

THE CONQUEST OF BLINDNESS
By H. Randolph Latimer
Price, $3.25, postpaid

BLINDNESS A BLESSING

A true story of how it transformed an Italian laborer into an educated man and a successful teacher.

KATHARINE G. ALLEN

Editor's note: This article was written in 1903, shortly after Mr. Delfino commenced his work with the blind. It will be of interest to many at this time in recalling the difficulties which he overcame and the way in which he commenced his outstanding work in rehabilitation and placement.

Between the ages of twelve and sixteen, when most American boys are at school, an Italian boy, Liborio Delfino, was a shepherd having the entire care of a large flock of sheep and goats. Except for a few winter months he was on the mountain side with the herds night and day, protecting them from dogs and wolves, milking the goats, making cheese, and shearing the sheep. The work was monotonous and hard and the pay for it belonged to his father; naturally he disliked it, and, after wringing an unwilling consent from his parents, he came to America to seek his fortune.

Liborio had been working with a pick-and-shovel gang but a few weeks when the foreman saw that he was a treasure; for although entirely unused to digging and although at the start he got very weary and lame, he never flagged, never grumbled, and was always good natured; if men were wanted for over-time he was one of the first to volunteer. He was such a good worker that he was given a man's pay, and in a short time was able to return his passage money to his mother. Had he not found the fortune he was seeking? In fifteen months he had been promoted to foreman's assistant, whether to his help or hurt will appear later. He was set to blasting in a quarry and was feeling so confident of himself that he had begun to dream of being foreman of a gang, when, on the last day of the piece of work upon which he was then employed he went up to a blast which had not gone off and was directly over it when it exploded. He was hurried to the hospital where it was found necessary to amputate his right arm at the elbow, and where it was discovered that his eyesight was completely destroyed.

Here he was, blind, crippled, away from home, speaking no English—truly a stranger in a strange land. His distressing condition, together with his apparent bravery and courage, elicited great sympathy at the hospital; the nurses and doctors all liked him. Several ladies who were frequent visitors there and who spoke Italian became interested in him and through them two managers, a wealthy Mr. Shoemaker and a rector, came to be much concerned for his welfare and became his lasting friends.

In spite of the kindness of these people to him, Liborio was bright enough to realize that there was a wide difference between himself and them, that difference which education and culture make. He himself had never gone to school and could neither read nor write. He was now eighteen, rather old to begin, but when Mr. Shoemaker suggested that he go to a school for the blind, in spite of misgivings he was so anxious to please these people who had done so much for him, and was so desirous of being like them, that he went to make the trial.

His misgivings were not without foundation in fact. He was a full-grown man in a school for young boys; he could not converse in English and was awkwardly getting used to the infinitely changed conditions of having only one hand, and that a left one, and of being always in the dark. He was miserably homesick and thought again and again, "Oh, if I didn't feel that those good people expected something of me, I would give up and go back home." Soon, however, his former courage came back. In three months he had acquired a working knowledge of English, and starting right in with the primary class he passed from grade to grade, finishing the whole school course in a comparatively short time.

Several examples will illustrate how the

characteristics he had shown his foreman helped him in his study. He thought out methods to suit his own particular case, evidently feeling no need of the half play methods of the kindergarten. As he had great difficulty with spelling he took a small dictionary and setting himself the stint of a certain number of pages a day he learned every word on those pages. If he was uncertain of the pronunciation of a word, he would have it pronounced over and over again until he was told that he had it right, then he could clinch that word and would never mispronounce it afterwards. The result of this care is that he speaks English without accent. Again, he wanted to learn broom-making and had hours assigned him for the shop. When he presented himself to Mr. Hamilton, the blind teacher in the broom shop, the latter cried out in a loud voice of ridicule, "Who sent you here?" Liborio answered, "Mr. Bivins sent me." "Ho, ho," laughed Mr. Hamilton, "he must be crazy. You can't make a broom; you haven't hands." "I have one hand," replied Liborio cheerily, "I think I can learn; try me." But the teacher turned away with a derisive laugh. One of the older boys overhearing the conversation came to him saying, "I'll teach you." He did so, and before long Liborio made two good brooms which he sent as a present to Mr. Shoemaker. Then he taught half a dozen dullards who had been trying for months to master the trade, but so far without success.

Not long ago he received a letter from one of these fellows which he showed with pride. It read as follows: "I am now making a good living by broom-making and I want to thank you for teaching me, for it was you and not Mr. Hamilton that taught me."

Though Mr. Hamilton never appeared to take any interest in Liborio's progress in the shop, at the end of the year he gave him an electric shock by awarding him the prize given yearly in that department "for patience, assiduity, and sustained effort."

Mr. Shoemaker kept up his interest in Liborio and occasionally had him spend Sunday with his family. There Liborio learned of the world of delight—the world of literature—which was still unknown to him, and he set to work to make himself a citizen of it. He was not one of those students to whom things come without effort. He had to work for all he got, but that was just what he was willing to do; the days were not long enough for him; sleeping and eating seemed to require time too valuable to be spent on such incidents of existence. For the next five years he read tremendously; he would read the raised print books in the library until, to his great distress, he wore the skin off his reading finger and set it to bleeding, or until he brought on such severe headaches that, great strong fellow as he was, he had to give up all mental exertion until he got relief through rest or exercise. Mr. Shoemaker supplied him with money for university extension lectures and for a seeing reader to read to him books that were not printed for the blind. At this time he could think of nothing and talk of nothing but the lectures he heard and the books he read.

When he felt that he knew English he was anxious to learn to read and write Italian. Books printed for the blind were procured from Italy, and you may imagine how pleased he was when he could write a letter home. He had learned to use a typewriter in the meantime, for he would not ask anyone to do anything for him that he could possibly do for himself. Later, as he wanted to read some Dante, part of the Inferno was embossed for him. This he read and reread until he had worn out the pages through passing his fingers over them. He took up Latin in the same indefatigable way, and picked up a knowledge of German that he might encourage the new German boys until they could speak English.

During the time he was studying hard himself he was constantly helping fellows who were backward and who were losing

interest in their work because they were falling behind. No matter how dull they might be he seemed to get hold of them and to be able to set them working.

Finally the time came when he had to go to the principal to talk over his future and his prospects of making a living. On account of the signal success he had had as coach, as well as in recognition of his loyalty to the school, his gratitude for his opportunities, and his ability to work hard and to take pains, he was offered the position of special teacher to the small number of young men there always is at the school who, like himself, have become blind after they were grown and have come there to learn "to be blind." First diligently visiting classes to get acquainted with the methods used by professional teachers, he gladly undertook the work. In this, as in everything else, he is most successful.

To his pupils he is, naturally, the greatest inspiration. He never allows them to flag or to give up; if they say they can't do something, he replies: "But you must. I did it and so can you."

Once he took a boy who had been in the regular school grades for six years, and who was fairly good in most studies but to whom no one had been able to teach arithmetic.

"Mr. Delfino," said the boy's teacher, "I wish you would coach this fellow. I don't believe you can teach him; he can't do arithmetic more than a pig, but you take him."

"I'll try him," said Liborio, "perhaps he doesn't like to be called a pig." After four months of timely encouraging and prodding he had put the boy through fractions and decimals, and, what was more, had the satisfaction of having him pass the regular term examination in those subjects. "That goes to show," said the headmaster, "that what he needed was individual teaching." "No," replied Liborio, "it shows that all he needed was encouragement."

I think it showed also that Liborio had learned some things not to be found in books; he had learned boy nature and boy needs, and to adapt himself and his teaching to them.

His work is colored throughout with considerable missionary zeal which still further manifested itself in his taking up, as a free-time and holiday occupation, the hunting up of eligible pupils who were not in school. This work takes him through the most crowded parts of the city and out into the most lonely districts of the country. When he can procure a guide he hires one; when he cannot, he goes alone; for go he will. The first week he undertook the work he got, from the census returns, the names of twelve young blind children in the city. Of these only two were at the address given; of the remainder, two having moved to other states, he found out about them from former neighbors; the others he hunted down although one had moved from one end of the city to the other, a distance of seven miles. Being himself such a speaking example of what the school can do for its pupils he can usually overcome the prejudice which keeps the blind child from being educated, and the children he hunts up are pretty sure to be sent to school.

The most remarkable part of this young man's story, however, remains to be told, which is that he has taken on the manners of the cultivated people with whom he has been thrown in contact. If he was ever like the typical Italian laborer he gives no hint of it now. He is scrupulously careful about his dress, courteous, equal to any and every emergency; with his inferiors he is kindly and friendly, with his superiors at ease and without self-consciousness.

Not long ago his mother urged him to accept a position offered him as teacher of English in a school near his home in Italy, but he said: "No, I cannot go; my best friends and all in life I hold most dear are in America"; and, he added in a softer voice, "My life is so infinitely richer than it was before my accident, I don't know but I consider the loss of eyesight my greatest blessing."

BLIND CHILDREN'S SCULPTURE

Taken from *The Tribune* for July, 1937

An unusually interesting collection of sculptures is kept at the Institute for the Blind at Hohe Warte, in Vienna. The sculptures are clay statues modelled by pupils of the Institute, children of ten to sixteen who were either born blind or lost their eyesight at so early an age that they have not retained any memories of the visual world. Yet these statues and busts express ideas and emotions in a way that makes a tremendous impression on the beholder, who cannot fail to be struck by the affinities with the work of Jacob Epstein and Rodin. There is an uncanny resemblance to the force of expression in primitive sculptures in the works of these children who have never seen or touched any models. The resemblance is not imitative; it is purely the tangible expression of the same emotion.

This unique collection of sculptures of blind children is the result of experiments conducted since 1923 by Dr. Victor Löwenfeld, teacher of drawing, who has conceived the idea of encouraging blind children to model in clay. He gives his blind pupils a certain amount of technical instruction, but does not influence them as to their mode of expression. Dr. Löwenfeld has found blind children, on the whole, far more gifted in modelling than the average child with normal sight. After two or three years of practice and tuition, the children do the best work of which they are capable; usually there is no further artistic development after the sixteenth year. They find great pleasure in the work, and do not need much encouragement to go on with it.

Blind children do not model in the usual way with the statue facing them, but parallel to themselves, as it were, with the face of the statue turned in the same direction as the face of the worker. The reason for this is that the impressions of the outer world do not reach them as they reach the normal eye, in a mirror-like projection. Their experience is primarily derived from the forms they observe upon themselves. Accordingly, the sculpture is formed in the same direction, the blind sculptor working upon the face of a statue in the attitude of embracing it. The children use no tools and work solely with their fingers.

The plastic conception of these blind child artists is entirely constructive. The elementary shape of a head or a body is first formed; all the features are added afterwards by putting on further lumps of clay formed to represent nose, eyes, hair, and so forth. In modelling a mouth they first make a cavity, form teeth and a tongue, which are placed inside, then add the outward shape of the lips, which sometimes covers the construction, but the teeth are there inside, just the same. Otherwise, for the blind sculptor, the mouth is not a mouth. When the children were taken on a steamer trip, and were later required to model a ship, they first constructed the engine room, the hold, and the cabins, and then covered the entire structure with a layer of clay, giving it, for constructive reasons, the shape of a boat.

The purpose of making something beautiful does not enter the mind of the blind sculptors. They do not use sculpture as a means to reproduce their conception of the visible world, but only as an expression of their feelings. Longing is expressed by a pair of over-sized, outstretched hands, agitation by modelling a mouth in a wavy line. This accentuation of feeling is what they seek to achieve in all their work. The blind children are aware that their sculptures are not like those of people who see; they do not strive to make them so. They are not interested in each other's work, and cannot understand the feelings or ideas projected into another sculpture save their own.

Dr. Löwenfeld, and Dr Ludwig Munz, who makes a study of the experiment from the point of view of the aesthete and the art

historian, have jointly published a remarkable book on *Sculptures of the Blind*. The most important inference drawn, they consider, is the negation of the current theory that those born blind have no "simultaneous sense touch"—that is, are unable to co-ordinate the single details of the tangible world of which they grow aware. The sculptures prove the contrary. Modelling has proved of great educational value as a key to the personalities of blind children. Dr. Löwenfeld finds that by means of the sculptures the children clearly express their reaction to experiences, their confusion or repression, which would otherwise remain hidden.

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spondence, commercial arithmetic, Roman history, history of art and the art of weaving, economics—problems growing out of the cost of materials and marketing, related science and invention, etc.

The Regents' Report states that "courses in agriculture, industrial arts and home economics probably have far greater value in most instances than courses in foreign language and mathematics."

If this is true for the seeing, it is even more true for the blind in the majority of cases. Our courses in agriculture, poultry raising, and stand keeping all point in this direction.

5. The health objective in education is so important that consideration should be given to new means for attaining it, and for eliminating unnecessary strains which undermine blind pupils' strength.

One reason for indifference, apathy, lack of initiative, etc., may be poor health.

Many of our pupils need to be built up physically as much as to be stimulated mentally.

6. The Regents' Report Committee recommends revision of methods of granting credits and promotion.

Some of the current practices which might be considered in The New York Institute are:

a. The unit system of promotion—promotion upon the satisfactory completion of a given unit of the subject might be introduced. Under this plan the pupil is not required to repeat units in which he has once passed.

b. The contract method, or modified Dalton Plan, lends itself to individual differences in some subjects.

c. Goal cards for each subject in each grade might be prepared, and the pupils' progress checked thereon. The Bronxville Junior High School has a completely worked out system on this basis.

7. There should be standardized promotion tests. The Regents' Report (Nov. 1936) says that in many schools "all pupils are not required to take Regents' examinations nor meet the Regents' standards."

In place of the Regents' examinations many schools are using objective achievement tests, such as the Metropolitan Achievement Tests of the New York City schools. These standardized graduation examinations measure the ability of the pupil to do the work of the elementary school. The passing of such tests is indicative of the ability to do acceptable work in the high school.

The unit system of promotion, coupled with the standard graduation examination, obviates many of the disadvantages which the Regents' examination system presents to handicapped pupils.

Our new lot of braillewriters has just been completed. Several mechanical improvements have been incorporated in the new machine and a set of paper rest arms at the rear of the carriage frame keeps the paper flat as it is rolled out of the writer. The price of the machine is $40.00, plus $3.50 for the carrying case, F. O. B. New York. Because of our limited capital for this project, writers must either be paid for in advance or sent purchase price and express collect. All orders will receive prompt attention.

THE TEACHERS FORUM
for
Instructors of Blind Children

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The Editor will not be responsible for opinions expressed in signed articles.

January, 1938

HOLIDAY CELEBRATIONS

Holiday festivals and other celebrations serve important needs in family life, it is pointed out by Mrs. Helen G. Sternau, Editorial Associate on "Child Study," the journal of parent education published by the Child Study Association of America, writing in the current (December) issue of that magazine.

"Family celebrations are a little out of style," Mrs. Sternau says. "With the waning influence of formalized religion, many of the traditional occasions have been lost. With the quickening pace of modern life and our new distrust of sentimentality, old forms have been cast aside as unsuitable. The smallness of our modern families and the isolation of the separate generations reduce for each of us the number of keenly felt family experiences.

"Undoubtedly we have gained in freedom and sincerity; but have we not lost something too—something truly significant for the family? For rituals and celebrations at their best serve important needs in family life: strengthening group loyalties, emphasizing individual worth, deepening individual experiences, preserving tradition, expressing in symbolic form those feelings and emotions which cry out for release.

"Quite aside from the religious connotation of Christmas—and there is no more lovely religious holiday for those who emphasize this aspect—it is widely celebrated as a family festival, possibly because it answers so perfectly the requirements of a satisfying family celebration. Its emphasis on peace and good will, on generous sharing, on the little child as the hope of the race, no less than its lights and decorations, and gay mysteriousness, provide the elements for family festivities at their best. The emphasis may change from year to year with the age and size of the family group, but no family is too old or too young to celebrate."

The birthdays of members of the family should be made special days for celebrating, Mrs. Sternau says, because they are "opportunities for ritualizing the concept of individual worth."

"Whatever form the birthday celebration takes," she suggests, "this stress on the individual must be manifest. Too often in our socialized age the opportunity is missed completely. The birthday girl or boy is just one more child at a children's party; the adult is similarly lost in the festivities which should honor him."

The two festivals which are dearest of all to the children of every generation, although they have little meaning to adults, are Hallowe'en and St. Valentine's Day, says Miss Elizabeth Irwin, Principal of the Little Red School House in New York City, in an article on school celebrations.

"While the teachers join gladly in the making of pumpkin lanterns and witches riding on broomsticks, and participate wholeheartedly in the Hallowe'en parties," says Miss Irwin, "I believe every modern teacher would gladly omit the side-tracking of the week's work into the composition of strings of red hearts and cupid arrows which return with the daffodils every February. These two celebrations above all others come from the children themselves, and it would seem to be denying an elemental impulse to try to abolish them.

"Peace and patriotism, religion and high sentiment may be laid on from above, but witches and cupids certainly appear spon-

taneously. Trivial as these may seem in an educational plan, they cannot be denied expression. Neither should we try to have them uplifted into anything noble or even dignified, but only to think of them as something to be added to the adult's memory of a pleasant 'always.'"

How the celebration of national holidays may serve as a means of giving children an understanding of the country's history and finest ideals is explained in an article by Mrs. Cecile Pilpel, Director of Study Groups of the Child Study Association.

"The reason we celebrate, or should celebrate, national festivals," says Mrs. Pilpel, "is because it gives us a chance to step out of the sea of conflicting contemporary criticism and center our attention on those things which are expressive of the highest objectives that our country stands for. Because of our democratic procedure in selecting a government head, we often resort to the lowest kind of villification or to lyrical rhapsodies, depending on the choice that we have made.

"Children subjected to such a performance need counterbalancing experiences more than do children of autocratic countries where patriotism is subject to no such strain. Celebrations of national events and national figures of the past may serve to show them their own time and their own leaders in a broader perspective, so that they may celebrate and learn to recognize greatness not only in its full achievement but also in its aspirations.

"Worth while celebration rests on a knowledge of the meaning of the historic events which inspired the holiday, of the worth of the ideals originally involved. The value of national holidays lies in just this: that in celebrating them we are setting a standard for ourselves and a standard which we can interpret to children even though the attainment often lags far behind the ideal. It is rather not so much a setting of standards as a continuous recalling of standards, in Lincoln's words a task of 'rededicating ourselves.'

"It seems particularly necessary in these times of strife when democracy is being attacked in such a concentrated and direct manner, that even in the midst of our conflicting action, we make efforts to define clearly those things and events about which we can find a unity of purpose, if we only give pause to think about them fundamentally. It is just now when the very ideals on which our government is founded are being flouted and frankly rejected as being untenable by large sections of our world, that the need for commemorations of our unity of purpose and of our best traditions is most strongly indicated."

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and improvement of the memory depends upon other methods than these.

It is now customary to divide memory into four fairly distinct part-processes—learning, retention, recall, and recognition. Learning is, technically speaking, the forming of associations; retention is due to the persistence of the association pathways which have been formed in the brain; recall is using again the associations which have been made; and recognition is locating recalled events and putting them into their proper setting in our past experience. It is absurd to imagine that memory as a whole can be trained. In fact, we often find cases of memory defect in which only one part-process fails to function, while the other three are normal. The memory devices which we have considered are really schemes for facilitating learning alone, though it is commonly claimed that they develop retention also; and it is a very grave question whether the results repay even the time required to learn such a system and to keep it in practice so it will function readily. We are justified in asking whether the same amount of time and attention put directly upon the material to be remembered would not give us equal control of the facts, without the system, except in the case of long

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GROUP PIANO CLASSES AT BRANTFORD

Zella I. Perry

In a school for the blind, music is a major subject in the course of study. It is given this prominence because aesthetically it is of great value to blind children. Our pupils cannot be painters or sculptors for instance, and there is a wide gap left in their artistic education. If the urge is within them—blind though they are—it must find some outlet, and having to depend almost entirely on their senses of hearing and touch, music is that logical talent—the outlet for their artistic expression. Being cut off from the world of the seeing, this form of self-expression enables the child and later the adult to live more fully in his own environment.

The music in our school until 1935 was taught entirely by individual lessons. At this time, finding that our staff of five music instructors was inadequate to meet all the requests for individual training in our various departments of music, I began to consider the practicability of class instruction for blind pupils, an idea unheard of and so far as I know, untried in any school for the blind on this continent.*

In order to become more familiar with the methods employed in piano class teaching, I took a summer course in Toronto, Ontario (1935), and in the fall of that year proceeded to adapt this course as far as possible to blind pupils. Needless to say, its introduction offered a number of difficulties to overcome.

With a class of normal children, blue-print keyboards are used. This type of keyboard is useless for our children since they must rely on the sense of touch. After considering ways out of this difficulty, I hit on the following idea: We procured keyboards from old organs and cut them down to three and five octaves. These were cut off close to the keys and glued to a board underneath, making the keys stationary. I speedily discovered that to glue the keys down was a mistake and we now have new five octave keyboards with an action similar to that of a piano; they accommodate four hands and give the blind student a chance to develop finger action with a sense of rhythm while using the "dummy." Such keyboards are in use in some places in the United States for classes of seeing children and are much superior to, although more expensive than the blue-prints generally used. The blackboard and ordinary printed music cannot be used with blind pupils; everything has to be dictated to them. Therefore, it is necessary for a pupil to be proficient in reading and writing music braille. In the past, this proficiency had to be acquired before they commenced to study music. This took the greater part of a school year, and was studied apart from and prior to the actual music lessons; and hence lacked motivation. Now under the class system the beginning pupil can start his music and music braille together, and the braille at once assumes a practical value.

So far as possible, I follow the regular course given to normal children, making only such changes as are necessary. For sight reading, we use new material which has been previously printed in our press room, each pupil having his own copy. This is read in concert or individually, each one correcting the others' mistakes, and analyzing the content theoretically and technically on the keyboard. We also spend much time on ear training. I play a short melody on the piano while the pupils write it down. At one and the same time they are learning and developing writing, rhythm, and ear training. We also cover expression, phrasing, elementary rudiments, some knowledge of cadences, transposition, and technique—at first, dealing with each of these subjects separately.

Our two main objectives in establishing these classes are being realized. They are

*Editor's note: Class instruction in elementary music was given at the Maryland School for the Blind for a number of years.

certainly proving to be a time saver. We are serving the maximum number of students in a limited time, with a limited staff. At present we are instructing four classes of eight members each—thirty-two pupils in four one-hour lessons per week. Each pupil has one-half hour of individual practice on the piano each day, and some of the pupils in these classes are expected to take their second grade examinations this coming June. This year, we are also experimenting in class teaching with a small group of violin students. We have a school symphony orchestra which has made tremendous headway since its establishment two years ago, and it is the ambition of even our youngest pupils to join this orchestra.

But apart from the difficulties of time and staff, I am thrilled to find my classes solving several old problems. Your music student is too apt to be a solitary person. Studying alone, and living alone with himself, he has missed much of the class spirit. Why not a class spirit in music as well as in mathematics or typewriting? It has grown in my classes and the stimulus of competition is precipitating keen endeavor. Thrown in with several other pupils, feeling their struggles, sometimes winning over them, sometimes falling behind, they are finding a new zest in the study of music.

Group teaching tends also to develop the timid child. Constantly hearing others play and constantly playing in class, timid Mabel loses much of her terror when asked to play at a school concert. Indolent Hugh finds that he is one of eight; he no longer gets the undivided attention of his teacher and must use his own initiative. But the inestimable value comes to many of my pupils who prefer to jump the fences and play by ear, leaving to their less gifted companions the longer but surer way through the gate. Teaching without sound is giving these talented pupils a surer grounding, forcing them to read, write and finger properly.

As an added bit of stimulation we have been having class contests—allowing the four losers on each side to treat or entertain the winners. This is an excellent method of review. Here again the class spirit is invaluable. Naturally, each side encourages and helps each of its members to do his best. One's best means a great deal not only to himself but to the class as a whole.

Of course, we have only begun to test the value of group teaching here. As time goes on, new ideas will be tried. But I feel that there are immense possibilities, especially for the beginner, and the fact that it is a fresh, little-explored field for the blind, makes it intriguing.

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lists of disconnected items, which can perhaps be more advantageously committed to memorandum sheets. If the system is not accurately used, disaster may result as in the case of the little girl who transformed the well known rhyme, and defeated her own end—

"In fifteen hundred and ninety-three,
Columbus sailed over the deep blue sea."

Our Contributors

Dr. Clarence R. Athearn is Director of Educational Research at the New York Institute for the Education of the Blind.

Dr. Samuel P. Hayes is Professor of Psychology at Mt. Holyoke College.

Dr. Merle E. Frampton is Principal of the New York Institute for the Education of the Blind.

Mrs. Katharine G. Allen is well-known in the profession, being the wife of our beloved Dr. Allen.

The work of Drs. Löwenfeld and Munz has attracted so much attention that we thought it worth while to reprint an article which appeared in The Tribune last summer.

Miss Zella I. Perry is an instructor in music at the Ontario School for the Blind.

The Teachers Forum

FOR

INSTRUCTORS OF BLIND CHILDREN

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ON LETTING ONE'S SELF GO

SAMUEL P. HAYES, Ph.D.

The control of emotion is a very live question in the practical application of psychology. Some people take a fatalistic position in the matter; we are born emotional or unemotional, they say, and there is little or nothing that we can do about it. No one is quite sure just how much emotion is *native* to human beings, but the more we study the feeling life of children, the plainer it becomes that man's emotions are as clearly subject to training as are his muscles or his sense organs.

A generation ago psychologists credited babies with a long list of emotions, but recent experimental work seems to indicate that not more than three can be generally assumed—fear, anger, and love. And in the case of each of these a baby starts with only a general emotional tendency; he has no specific pattern of behavior and of course he must learn *what* to fear, *what* to fight, and *what* to love just as he must later learn *what* to say. Little babies might reasonably be called very brave. There are hundreds of things that adults fear which make no impression on a baby. To be sure a sudden loud noise or the removal of physical support will produce behavior which we interpret as fear in an infant only a few hours old. But mice and insects, lightning, all sorts of animals (not to mention ghosts and burglars), are feared only after some unpleasant experience with them has taught a child to be afraid. As children grow up they may be rated brave or cowardly according to the variety of things of which they are afraid. To limit the production of timid and cowardly people it is now a fundamental maxim of psychology to protect babies and children from incompetent nurses and bad companions who might scare them, and to educate teachers and parents to secure discipline by better methods than through an appeal to fear. On the whole one may say that babies tend to be affectionate, and to accept the world about them in a kindly spirit. They readily learn to love those who treat them kindly and respond with signs of affection to gentle and considerate handling. Their third emotion, anger, appears only under unusual circumstances. A very young baby may be thrown into an excited or angry state by one of its feet or hands being held or by being prevented from moving its head. Delay or disappointment due to lack of regularity in feeding may similarly bring on an angry response, and if constraint and disappointment occur frequently and reasonable satisfactions are not regularly offered, a placid, affectionate baby may be turned into a peevish and irritable one. Animal trainers claim that no dogs or horses are born vicious, but that unwise and unkindly treatment may spoil the disposition of the finest animal. Teasing a child seems to have the same effect as teasing an animal, and such treatment of either is now strongly condemned.

During childhood, if the conditions are right, the brave baby becomes a brave boy or girl. Of course even a brave boy may have to keep up his spirits by whistling as he walks through a graveyard. If as a child the boy has not been taught to fear bogey men or ghosts, but has filled his mind with stories of heroes in history, he will ordinarily develop into a brave adult. Anger too may or may not become a major issue according to training. If the wrong methods have been used during babyhood, there may be times when the child will have difficulty in controlling its temper. But by wisdom in avoiding unnnecessary issues, and an appeal to inner controls, anger when it comes may be developed into righteous indignation for a cause, and this is often a real social asset. The affection of infancy naturally develops into the friendship of later childhood and into gang loyalties, and becomes the bond which holds young people together in clubs and camps.

By the time children have become adults many can be classified in one of two extreme groups, those whose emotions are expressed, and those whose emotions are inhibited. In the outspoken group we find the people of general sociability, the "hail-fellow-well-met," the good mixers, the happy-go-lucky people. We also find people who frankly tell you what they think of you: and they may be choleric and ready to swear or fight. And there are people who are always seeking someone to whom they can tell their troubles. They constantly demand sympathy and seem to think that one of the greatest joys in life is "having a good cry." At the other extreme we find the repressed or restrained people: those who seem unresponsive and have difficulty in making friendships, those whose anger is slow burning and vindictive, and those who are seriously disturbed by their burdens and yet do not feel free to share them with anyone else.

Which is the healthier type? On the whole is it better for the individual to express or to repress his emotions?

The clinical psychologists of our modern school have much to say about the evils of repression. In many a mental disorder, after long search, they report the discovery of some unexpressed emotion which has wrecked a life. They explain the action of emotion in quasi-physical terms. A wish, they say, starts something going within us which produces more and more pressure and unless some safety valve is provided, something will burst, just as steam in an overheated boiler will ultimately be too strong to stay within bounds. Fear and anxiety produce sleeplessness because the energy generated by the fear is constantly seeking an outlet and keeps the mind stirred up with its continuous pressure. Grief that cannot be expressed may drive us mad or paralyze us with melancholy. Impotent anger in the presence of a superior lays up trouble for the weaker ones at home. Unless our emotions can get expression either directly or indirectly we are bound to develop some highly undesirable mental condition, and certain writers go so far as to caution parents against restraining any of the emotional expressions of children. On the whole they claim that expression is healthier for the individual than repression.

Moralists and most teachers of psychology dislike this picture of a world without restraint and seek a method which shall be better for society and healthier for the individual. They point to the vast amount of trouble that emotional people cause. Whenever feeling rather than reason guides our action we find it very hard to get along in society. The cool, intellectual treatment of problems gives valid conclusions and establishes principles and rules of conduct which hold society together. Science is built upon such foundations. The emotions, however, are highly individual and contribute to personal satisfaction rather than to the interests of the group. Alibis and false reasons are constantly given as excuses for getting what we want and unless free emotional expression is kept within bounds chaos is almost sure to follow; for emotional people are essentially unreasonable. The inhibited people are perhaps not so often real trouble-makers but they are hardly to be preferred as material for social cooperation. As their personal feelings are constantly in the center of attention, they can hardly be counted on to do their part in society. Moralists prefer to either of these groups, the people of poise and balance whose warm emotional life is neither dampened by unfortunate experiences in childhood nor unduly prominent because of a theoretical need for constant expression.

Recent studies of the mechanics of the emotions make it perfectly plain that it is possible to control their expression and gain this highly desirable condition of poise and balance which is so much better for society than either extreme inhibition or extreme expression. Emotion is essentially automatic. Just as the presence of a savory food in the mouth causes the flow of saliva,

so certain situations cause an almost mechanical emotional response. Of course the situations that cause emotion change as life goes on but many adults still weep over a story or a play as naturally as an infant smiles when you tickle its lips. If we wish, we can control the expression of emotion either by changing our mental attitude or by changing the bodily response. A friendly slap on the shoulder may arouse anger or disgust if it is given by someone we dislike; a totally different emotion will arise if we find the slap to be the greeting of a long awaited friend. Similarly grief over a sudden bereavement may be lessened by realizing that a universal law is involved against which man's efforts are vain. If we can change our emotions by changing our mental attitude, an obviously wise plan for winning a large proportion of pleasant emotions is the deliberate assumption of a friendly or optimistic attitude towards the world, avoiding both pessimism and cynicism. If we are looking for slights and insults we can find them where none were intended, and our emotional life will be in constant turmoil.

We may often control emotion by changing our bodily position or actions. Offering a bold front is much more likely to make us brave than any sort of retreat, for running away increases the terror that caused the running. Many an embarrassed speaker has conquered his fear by the simple method of throwing back his shoulders and breathing regularly. The old advice to count 20 before speaking in anger is good modern psychology, for not only does the delay provide time for the coming of saner thoughts but the counting itself is an unemotional action which tends to remold us into a cooler state. One might go still further and say that while we may often overcome anger by waiting or by walking it off, we could conquer it still more quickly by lying down and deliberately relaxing all our muscles.

Poise and balance are certainly far better for society; apparently they are also better for the individual. To remove our fears, if they are persistent and seem to be beyond our control, some sort of confession is often the best prescription. A trusted friend, an honored minister or physician, a specialist in mental troubles, may quickly give satisfactory relief. When anger is aroused and seems likely to escape control, we may well seek for some cause to fight. The substitution of an outside interest for a personal grievance may turn an apparent evil into a valuable force for good. Our other fundamental emotion, love or friendliness, is not likely to be expressed too much. All around us there are people seeking praise, longing for friendship. Nothing could be better both for society and for the individual than a great increase in our expression of good feeling.

Shall we let ourselves go? In general, psychology and ethics unite in advising a temperate course. Anger, fear, and love seem to be natural enough, but all three must be expressed in moderation for a satisfactory group life. Unnecessary and arbitrary restraints are probably bad for the individual and so ultimately for society, since a warped individual is almost sure to be a social failure. But inner control and wise direction of the emotions seem to meet the mental health needs of the individual, and at the same time to give to society the balanced reasonable character which insures the permanence of the social group.

THE TEACHERS FORUM
for
Instructors of Blind Children

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The Editor will not be responsible for opinions expressed in signed articles.

March, 1938

DOCTOR ALLEN SAYS:

David D. Wood as a Teacher for the Blind, and Great Alumnus of the Pennsylvania School for the Blind.

In his essay on unconscious tuition Bishop Huntington of Central New York contrasts two kinds of instructors, the one laboring to teach, the other teaching; the one striving along a routine and managing to create a dislike for the subject in hand and a joy only when the lesson is done, the other not only interesting the student but making him forget himself and the hour, absorbed in the beauties that have been revealed to him; for, drawn to his teacher as iron to a magnet, he takes from him some property, some quality, and becomes a little like him.

Such a teacher was Mr. Wood to his pupils at the School for the Blind. He brought with him always an atmosphere of this unconscious tuition which the pupils breathed in whether they would or no. They had other instructors, but he was to them "the master." One of his associates has said of him: "His absolute knowledge of the subject in hand, his refined musical taste, broad sympathy, infinite patience and wonderful simplicity and clarity of explanation made him, not a mere teacher of tones and time but an expounder of a subject in which he was intensely interested." Those who were his pupils still think of him as the master, because of the depth and beauty of his character. They always gave him, first profound respect, then admiration, then love—feelings which he in large measure returned; for he was not distant in greatness as some people seem to be, but approachable, nay sympathetic and affectionate. It was a common sight to see him between lesson periods with a pupil on each arm, walking and talking in the corridors. This was prolonging the hour when they could be with their dear teacher.

Every one who knew Mr. Wood realized how all-round a man he was; how well read, not in his subject alone but in all subjects. That he was a cultured man of affairs was evident to his blind pupils. Because of this they revered him all the more and, like disciples, sat at his feet and listened; for it was his custom after a lesson to speak of something suggested by the piece of music in hand—some incident in the life or times of the composer, from which his pupils got a deeper insight into the work and some came to play or sing it with better understanding and feeling. These incidental talks they recall now with satisfaction almost greater than the sympathetic criticisms of the music lessons themselves. Indeed, "no one could come under his influence without learning something of the best things in life and no young student ever went to him who did not realize that learning music must be accompanied by other things that would broaden and develop the mind."

He believed that impression must precede expression; possibly most teachers do. But Mr. Wood felt also that youth should be joyful; that school work should be hopeful, certainly never depressing; that what of the drudgery of practice had to be should be relieved somehow by pleasurable anticipations of the reward of success. Thus, he was careful not to dampen the ardor he awakened. He would explain the reason for the exercise, then relate some story in point, which tended to sustain the interest. Also, before beginning on a new piece or cantata he would talk of the composer, his life and ideals and what he wished to portray in his music. Of course the pupil was started with the right impression and was able to produce the better expression.

Such freedom from rigidity was naturally acceptable. It tended to reveal the soul in music and helped clarify the ideals Mr. Wood desired to hold before the learners' minds—that music should be studied as high

art, capable of expressing all human emotions. There was something sacred to him about the organ, and he could not bear to hear light music played upon it or slovenly playing of any sort.

Music was not to be lightly studied. To him it was almost religion, notably so Bach's music. Not every pupil was admitted to the department, though every one was tested as to fitness for trial. His department was always full and had a waiting list. When the recruits were to be added he consulted the teachers of other departments and chose those boys and girls who were reported as combining the best use of head and hand. He thus made it a privilege to be in music; which privilege he enhanced by dropping out those who did not progress. His penalty for neglect or misconduct was a temporary deprivation of music opportunities.

What wonder his pupils worked for him! This kind of school work they liked. In 1896, when a test of study preferences was made, nearly half the pupil body voted for music. Did not this indicate that Mr. Wood was easily the chief influence in the school? And his requirements were high, too; the greater the difficulty in a selection the greater the fun in its surmounting. Before granting a pupil a diploma in music he required him to show his sustaining powers through a long and exacting program, usually embracing a difficult *concerto* number. Once, when a brilliant piano pupil of his lost her right arm in a railroad accident in the very year of graduation, he yet brought her through the recital ordeal, having found or written for her music for the left hand only. I feel sure she feels that no other master could have so given her the courage to persevere. Like many another of his blind pupils she has since achieved pronounced success as a teacher.

The sympathy between him and his doubly afflicted pupil was tender and true. His feeling for all the pupils of the institution was strong; the bond between them was a natural one and not to be lost sight of in estimating his service as a teacher of the blind. He was one of them—an older brother who had risen above obstacles and made his mark as a successful man, indubitably the greatest alumnus of the institution. He was their *beau ideal* of achievement, their hero. Obviously they strove to be like him; hence his eminent success as their teacher.

Mr. Wood's strength was a consecrated strength, as has been shown. He wished to help his pupils to become strong in the same way. Music could be made a means to the formation of character; and he strove inspirationally to this end. He therefore started them with wholesome music—music that was expressive of buoyancy and good spirits. What nonsense to introduce the morbid or the passionate to children! They grew best in character and soul through contact with the simple, the joyful and the pure. He would give them only music that was chaste. The old masters composed chaste music; hence, his choice of Beethoven and Handel and, where possible, Bach. In the old masters there was less straining for effect than among modern composers; the former were absorbed in their art, kept more to the childlike and the simple, and thus more within the understanding of young learners—and his young learners were to be kept like them as long as possible and so come to find in music a solace and a joy—almost a religion. What music had meant to him he would have it mean to others similarly shut in.

For these reasons he trained his blind chorus to sing Mendelssohn and Haydn and Bach. You all recall the wonderment with which you listened to their rendition of *The Hymn of Praise, The Seasons, Elijah, The Creation, Acis and Galatea,* and *My Spirit Was in Heaviness;* and perhaps you failed to comprehend why he chose such selections—withal such difficult ones. It was as above explained; they represented to him the pure in music. Touching their difficulty—difficulties were also things to be overcome. He had found all through life that a brave and

courageous heart and a pure and hopeful spirit had put down the difficulties and had enabled him to rise by their means to a happy life of service alike to his art and to his people. His confidence in his young chorus was absolute—had become so throughout years of association. It was that "there is no blindness where there is faith." His pupils felt this, leaped and responded to it, as you must know. Of course, there were months of drilling and many hard places to overcome; but he was never discouraged and he knew well how to preserve his singers from discouragement. He took plenty of time—there was a quiet strength in his deliberateness—surrounded them with an atmosphere of understanding and aspiration and with plenty of praise for things well done; and they did it—did it for him, and for the cause of the amelioration of the conditions of the blind.

What the singing of these oratorios meant I need not attempt to tell you. It may be confidently stated, however, as I once said in 1905 after the singing of *The Seasons,* that "nothing else that the school ever did has made such a far-reaching impression in the institution itself as this oratorio has; and nothing else has at one stroke so raised, in our community, the cause of the education of the blind."

(Read at the Festival of Music, commemorating the 100th Anniversary of the Birth of David D. Wood, St. Stephens Episcopal Church, Philadelphia, March 1, 1938.)

ORDER NOW!

"THE CONQUEST OF BLINDNESS"

By H. Randolph Latimer

S. M. Green, Superintendent, Missouri School for the Blind, St. Louis, has written Mr. Latimer: "Mrs. Green and I have both enjoyed reading your book. It has been interesting to note the history of your own reactions from childhood, as well as your compilation of the work of the blind as it now exists. I hope your book will give impetus and correlate the aims of some of our workers in an endeavor to secure united action on problems of the blind." Price, $3.25, postpaid. Order from the Foundation.

PHYSIOTHERAPY AT PERKINS

Thelma E. Peirce

Early educators of blind people realized that loss of sight is conducive to poor posture. Feeling the need of eliminating what might become a second handicap, a special department in corrective gymnastics was organized at Perkins Institution in 1894. Miss Lenna D. Swinerton, who is one of the outstanding graduates, started this work. She began her study of massage under Dr. Douglas Graham and later took the course in medical gymnastics at the Posse School. She started a private practice giving a few hours a week to special cases at Perkins. A little later she organized the department in corrective gymnastics. Being totally blind herself, she was better able to understand the problems of the pupils and until the year 1932, she gave them her untiring efforts. Miss Jennie M. Colby, graduating from Perkins with Miss Swinerton, should be given recognition for the fine work she did in this field, although not connected afterwards with the school. Miss Colby was called the parent of hydrotherapeutics in Boston, and for twenty-five years devoted her skill to the out-patient department of the Boston Children's Hospital. Her practice in massage and exercises not alone built up her reputation; for a number of years she carried on a gymnasium and some of her pupils have become well-known to the profession.

Today Perkins has a modern, well-equipped department in physiotherapy with a graduate of the Harvard medical course in charge, assisted by students from Sargent College. The physical therapy unit at Perkins occupies one wing of the hospital building; the remainder of the building is used by the nurse, dentists, and ophthalmologist. There is the usual equipment of rings, head sling, and exercise tables. There is also a Lovett board, which is used as a method of derotation in cases of lateral curvature. This board was made by the

school carpenter and swings up against the wall when not in use. Luminous and infra-red lamps are used in treating various traumatic cases referred from the medical department. The pupils derive much pleasure from using the blow bottles made by the chemistry department.

Accurate records are kept of the diagnoses and prescriptions made by Dr. Frank B. Ober, Chief of Orthopedic Service of the Boston Children's Hospital, who visits the school twice a year. Silhouettographs are taken of each pupil by Mr. Norman C. Fradd of Harvard. These make a very interesting record and also serve as an incentive to good posture. Mr. Fradd takes first, a side view of the natural standing position; second, a back view to show lateral deviation; third, a side view of the child correcting his own posture; fourth, a side view with Mr. Fradd's correction. The silhouettographs are graded and returned to the school.

Of the forty odd cases treated a day, most require exercises to overcome the more common postural defects, such as round shoulders, protruding abdomen, forward head, and hollow back. The more rare cases include structural curves, birth injuries, infantile paralysis, Still's disease and brain tumor cases. The work is all done individually and the pupils seen two or three times a week. The cases referred from the medical department include sprains, fractures, and any limitation in joint or muscle due to long immobilization.

Much attention is given to the children's shoes. A child poorly shod cannot be expected to stand well. Many of the children are given foot exercises in conjunction with shoe corrections, such as Thomas lifts for pronation, plates and felt or sponge rubber pads for low longitudinal and metatarsal arches. One girl, who has attained full growth, had shoes made at the United Shoe Machinery Research Laboratory to take care of a leg shortening. The lift is put inside the shoe and is less conspicuous than the usual way of building up a shoe. A magnetic table was used to obtain an accurate imprint of the foot.

In addition to the regular work of this department, supervision is given to the seating in the dining rooms and classrooms. Both kindergarten houses are equipped throughout with chairs specially constructed to encourage good sitting posture, some being Goldthwaite chairs.

An effort has been made to make posture tangible and interesting to the pupils through different devices. Plasticine models which were made from actual cases, one with an "A" posture and one with a "D" posture, have been of particular value. These are not difficult to make. An armature is used, placed on a base of plasticine or soft rubber, then the model is worked around this. It should be shellaced to make it more durable. Another means of promoting good posture is the Merry Sit-up Club, made up of primary girls who have put forth a definite effort to stand and sit well. The activities of this club include hikes, outdoor suppers, and swimming parties. Caps and slippers have been knitted by them for the Boston Children's Hospital. A very successful posture week was held. All the pupils started "at scratch," wearing white ribbons which were to be kept as long as good posture was maintained. At the end of the week the white ribbons were counted, and the class possessing the most was given recognition. A posture tea and demonstration was held for the faculty, and a posture play was given in morning assembly. As another variation, exercises and sunbaths are given on the roof in warm weather, and the swimming pool is utilized for some cases where this form of treatment seems advisable. Good posture in the classroom is encouraged by hanging a "good posture" banner in the room having the best posture during the month.

Several of the older students have shown an interest in learning massage, with a possibility of pursuing this as a profession. A

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RECOLLECTIONS OF MR. WAMPLER'S COURSES FOR TEACHERS

JESSICA L. LANGWORTHY

Among the pleasing memories of my life experiences in the education of the blind, a very prominent one is that of the summers at the Tennessee School in connection with the courses for teachers at the George Peabody College for Teachers.

Early in 1921, Mr. I. S. Wampler, the Superintendent of the Tennessee School, wrote to Dr. Allen, saying that he wished to establish classes for teachers of the blind already in service. These courses were to be held in the summer for the convenience of teachers and were to be sponsored by George Peabody College, with boarding privileges at the Tennessee School. They were to be accepted for collegiate credit at the College, just as other courses were. Mr. Wampler asked Dr. Allen if he could furnish experienced teachers capable of conducting such work. Naturally, Dr. Allen was interested, for he himself was promoting courses for teachers under the aegis of Harvard University, under a somewhat different plan. Dr. Allen gave the opportunity to Miss Humbert, our efficient kindergarten teacher, and myself, and with some misgivings in regard to this untried venture, we accepted. Miss Humbert was always busy with her little children and I had supposed myself to be as busy as possible, as I was then the head of the Boys' Upper School; but with the help of our efficient librarian, Miss Laura Sawyer, and the cooperation of Dr. Allen, we prepared ourselves as well as possible. The inestimable privilege of sending all of the Perkins material, in books and apparatus, that we needed to the scene of our labors, was of the greatest help and proved an inspiration to our classes. The courses were to be five in number, Miss Humbert taking kindergarten and primary methods for blind children, and I, the history of the education of the blind, and high school and grammar school methods.

Early in June we started on our great adventure. At the Nashville station we were greeted by that genial gentleman, Mr. Wampler, and taken to the Tennessee School, where Mrs. Wampler and the members of the staff soon made us feel at home. Although the school was not in session when we arrived, we soon perceived it to be a most efficient institution. Mr. Wampler was an excellent administrator as well as a progressive educator, and he was ably seconded by his wife, who was as interested in the work as he. They knew their pupils individually, and intended each child to have whatever he most needed. The courses of study were fully equal, and in some respects superior, to those of the public schools. He was improving his equipment as rapidly as possible, and raising the standard of teaching—as was shown by this latest movement for courses for teachers of the blind. Work and play were combined according to the best educational theory. He was closely in touch with the George Peabody College for Teachers and the members of its faculty, especially Dr. Bruce Payne, the President, who seemed glad to lend his aid to this branch of education. The teachers of the Tennessee School were encouraged to study at this friendly college at their doors in other fields, as well as in their own specialty, the education of the blind.

By his preliminary efforts, Mr. Wampler had collected for our first class a fine group of men and women, with some of whom we continue our friendship to this day. Dr. Allen, Dr. Burritt, and Dr. Van Cleve made special trips to give us the benefit of their broad experiences, and we had a number of formal sessions with them at the college, as well as informal ones under the trees of the pleasant grounds of the Tennessee School, and on its broad verandas. Under such conditions, and with the constant support of

Mr. Wampler, the summer could not help being a success.

For the purpose of illustration, I had taken with me for this session, many examples of the work of our girls' manual training department, then in charge of my sister, Frances M. Langworthy, which so pleased Mr. Wampler by their careful progression and excellent workmanship, that when he gave us the invitation to return for another session in 1922, he included my sister, who came prepared to demonstrate and teach her sloyd system of manual training for girls. Unfortunately, soon after she came she fell and broke her arm, but in her usual valiant way, she carried on, continued the work she had come to do, and with arm in sling, attended all sessions of her classes without missing one.

For the next few years, the courses were carried on by teachers from other schools, as was fitting, but in 1926, when the A. A. I. B. Convention was held at the Tennessee School for the Blind, we were again invited to come. This time we found it impossible to stay the full six weeks, but we carried on the work for three weeks, had the pleasure of attending the convention, and then left the completion of the course to another group of teachers.

My recollections of the time spent at the Tennessee School are all pleasant. It was a most profitable experience. We felt that Mr. Wampler was blazing a new trail for the benefit of the education of the blind, and we were glad to help. The sessions were held at the George Peabody College for Teachers to give contact with college life, but boarding facilities were furnished at the Tennessee School in order that we might have a chance for informal talks and closer acquaintance with each other. The plan worked well. Lasting friendships grew out of it, as I have said, as well as a better knowledge of each other's problems.

The Harvard courses and the George Peabody courses supplemented each other in an efficient way. Dr. Allen, with the support of Harvard University, was making a pioneering effort for teachers preparing for work for the blind, or, possibly, on leave of absence from their schools. These courses were held during the school year. Mr. Wampler pioneered in another direction. His efforts, sponsored by George Peabody College, were for teachers in service, and were therefore held during the summer. He thus gave them the chance to study their work critically, while yet engaged in it. That the two efforts were made in different parts of the country was a valuable feature.

I value highly my friendship with Mr. and and Mrs. Wampler. He was a true educator and she, his ever ready helper. Schools for the blind do not always secure such devoted workers, planning always for the good of their schools. Mr. Wampler will have the reward of knowing that he did a good work for his school, and made a splendid contribution to the education of the blind.

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preliminary course in anatomy and massage is given to this group. At present we have three pupils who have become quite proficient in massage. Their services are in much demand by members of the staff. One girl, who had this introductory course at Perkins, graduated from the Swedish Institute of Massage in New York City. Because this is such a suitable profession for blind people, it seems that any blind man or woman fitted by health, temperament, education, and general ability to follow this satisfying work should be helped in every way to do so. At present there is the problem of establishing them after training and gaining the confidence of medical men. In England this work is well established and has the recognition of leading physicians.

TEACHERS IN RESIDENTIAL SCHOOLS FOR THE BLIND

Editor's note: For a number of years we have thought that it would be helpful to have a list of the teachers in residential schools and day school classes for the blind, together with the schools where they are employed and the subjects or grades which they teach. This could be revised each fall and published in the January issue of "The Teachers Forum." It should be valuable to teachers who wish to get in touch with others who have common interests, and to those who wish to select teachers to take part in convention programs, write articles for publication in our magazines, etc. After the plan had been followed for a number of years, it would enable one to learn easily how long a teacher had been in a certain school and in what other schools she had taught. This would be interesting to superintendents who contemplated employing such a teacher.

Even though we postponed publishing this list from January until March, we did not succeed in getting the necessary data from a few of the schools: the Georgia Academy for the Blind, St. Joseph's School for the Blind, and the Oklahoma State Institute for Deaf, Blind and Orphan Colored Children; and from the day school classes in Buffalo, Chicago, Cincinnati, Paterson and Toledo.

We hope that we may have a complete list for the next school year. Hereafter, it will not be much trouble for the superintendents to furnish us with the necessary information, as we shall send each of them a sheet listing their teachers during the preceding year. This list can be easily checked and the names of teachers who have left crossed off and those of new teachers added. If you have any suggestions as to ways in which the listing may be improved, we should be very glad to hear from you. We hope that it may be possible to extend this idea so that other helpful information in regard to the schools may be made available.

Name	*School*	*Subjects or Grades Taught*
Aaron, Beatrice	New York Institute	Arts and crafts
Abbott, N. C.	Supt., Nebraska School	Literature
*Abel, Georgie Lee	Iowa School	Language, spelling—grades 5-7
Abraham, David	Perkins Institution	Auto mechanics
Adair, W. C.	Prin., Oklahoma School	
*Adams, Herbert W.	Wisconsin School	Orchestra
*Adzit, Marie	Missouri School	Third grade
Alexander, C.	Tennessee School, Colored	Kindergarten, grades 1-3
Alexander, Frances	Montana School	Primary academic, handwork
*Alexander, Marina	Mississippi School	English
Allan, M. Blye	Kentucky School	Fifth grade, basketry
Allee, F. F.	Arizona School	Arithmetic, shop work
*Allen, J. G.	Louisiana School	Piano tuning
*Allen, W. E.	Supt., Texas School	
*Alma, M., Sr.	Catholic Institute	Grades 3-4, typewriting
Ambrose, M., Sr.	Supt., Catholic Institute	
Anderson, Anna	Michigan School	Girls' physical education
*Anderson, Joe	Kansas School	Piano
Andrews, F. A.	Iowa School	Economics, ancient history
Andrews, Francis M.	Prin., Perkins Institution	Biology
Applegate, Wayne	Kansas School	Boys' industrial, broom making
Arnette, Lois	North Carolina School	Fifth grade
*Arthaud, Bessie	Iowa School	Arithmetic, geography—grades 5-6
Arthur, Ethel K., Mrs.	Pennsylvania Institution	Girls' principal teacher, history
Ash, Florence	Royer-Greaves School	Weaving, basketry, leather working, sewing
Athearn, Clarence, Ph.D.	New York Institute	Social science
Autrey, B. P., Mrs.	Alabama School	Grades 3-4
*Bader, Junerose	New York Institute	Deaf-blind
*Badgley, Grace	Ohio School	Second grade
Bailey, Richard	California School	Piano
Baker, Mary Ethel	W. Pennsylvania School	High school
Baker, Nannie, Mrs.	Tennessee School	Handicrafts

Name	*School*	*Subjects or Grades Taught*
*Ballard, Byron B.	New York State School	High school
*Balter, Peter	Maryland School	Piano tuning
*Barber, Ruth L.	Wisconsin School	First grade
Barbour, Florence W.	Perkins Institution	Languages
Barnett, Fred M.	Wisconsin School	Basketry, chair caning
Barrett, Florence M.	Connecticut School	Seventh grade, commercial
Barrett, Maud W.	New York Institute	Domestic science
Bartholomew, A. R.	Kansas School	History, English
Bartholomew, M., Sr.	Supt., St. Joseph's School	
Bartlett, Barbara E.	Connecticut School	Grades 3-4
Bass, Maude L.	North Carolina School	Piano
Bauguss, Paul L.	Perkins Institution	Violin
*Beadnell, Thomas A.	New York State School	Vocational, piano tuning, poultry husbandry
Beal, Marjorie	Perkins Institution	Fifth grade
Beard, Catherine	Kentucky School	Geography, language, typewriting, salesmanship, business arithmetic
*Beaty, H. Wilson	Florida School	High school
Beaumann, Julia	Minnesota School	Special department
Beaver, Beulah	Texas School	Music
Beck, Rilla	Louisiana School	High school—history, English
*Becker, Anna	Ohio School	Piano
Beckman, Clover	Nebraska School	Typewriting
Belcher, S. L.	Tennessee School, Colored	Music, glee clubs, choruses, braille, rhythm band; commerce, grades 9-12
*Bell, E. Mildred	Connecticut School	Grades 1-2
*Benigna, M., Sr.	Catholic Institute	Music, kindergarten, first grade
*Bennett, Bertha	Iowa School	Third grade
Berhow, B. L.	Prin., Minnesota School	
Bernstein, Ben	Michigan School	Orchestra
*Best, Lester	Missouri School	Violin
Best, R. Doyle	Supt., Tennessee School	
*Bieter, Florence	Minnesota School	Piano
Bigelow, Natalie	California School	Violin
Biggers, Elsie, Mrs.	Texas School	Music
Biggs, Ione	Texas School	Kindergarten
Black, William C.	Virginia School	Director of orchestra, orchestral instruments
Blackburn, E. S.	Texas School	Vocational
*Blackman, Cora	Michigan School	Deaf-blind, student assistant
Blake, Florence L.	Colorado School	Grades 6-7
Blakemore, James E.	New York Institute	Social science
Bland, Lemuel C.	Prin., Texas Institute, Colored	Latin
Bledsoe, C. Warren	Maryland School	Elementary and high school English
Bledsoe, John F.	Supt., Maryland School	
*Blevins, Stella	North Carolina School	Handicrafts
Bloss, Lola	Michigan School	Home economics
Bolen, R. E., Miss	Louisiana School, Colored	Elementary, foods
Bolling, E. A.	Supt., W. Virginia School, Colored	
Boogher, Geraldine	Missouri School	Grades 7-8, typewriting
Booth, Helen F.	New York State School	Home making, industrial arts

Name	*School*	*Subjects or Grades Taught*
Borst, Homer F.	South Dakota School	Orchestral instruments
Botts, Joseph H.	Missouri School	High school, shop work
Bounds, Laura, Mrs.	Mississippi School	Grades 2-3
Bowers, Anne	North Carolina School	Grades 6-7
Boyd, Alice E.	Maryland School	Piano
Brame, Sue Stuart, Mrs.	Mississippi School	Kindergarten, first grade
Brammer, Eva	Ohio School	Cooking
*Brandeen, Emeline	Minnesota School	Piano, organ
Brannon, Selden W.	W. Virginia School	History, civics
Brayer, Edward H.	New York State School	High school, history
Breitenwischer, Ruth	Michigan School	Home economics, assistant
Bricken, Fay	New York Institute	Violin
Brockman, Ida B.	Alabama School	Grades 8-9
Brodbeck, Marie A.	Pennsylvania Institution	Kindergarten
Brooks, Elizabeth	Illinois School	History, sociology
Brotherson, Esther	Kansas School	Special braille class
Brown, A. L.	Supt., Colorado School	
Brown, A. W.	Prin., Kansas School	Science, mathematics
Brown, Charles W.	W. Virginia School	Grades 3-4
Brown, Ruby	Oklahoma School	Substitute and relief
Brown, S. W.	Colorado School	Broom and brush making
Bruggemann, Elsie E.	Pennsylvania Institution	Piano
*Brunelle, Cecelia	South Dakota School	Grades 1-4
*Bryzel, Mabel, Mrs.	Minnesota School	Upholstering
*Buell, Charles	Washington School	Boys' dean, physical education
Bullard, Effie L.	Pennsylvania Institution	Fifth grade—girls
Bullard, Laurence	New York Institute	Agriculture
Burbank, Mary	W. Pennsylvania School	Home economics
Burch, Ruth	Mississippi School	English, history, civics
Burchfield, Lelia	New Mexico School	Grades 4-5
*Burdine, Beulah	Iowa School	Language, spelling, braille, stenography, history—grades 5-6
Burgess, Evelyn	Nebraska School	Physical education
*Burke, Agnes	Kansas School	Grades 1-2
Burns, Ellie Ayers, Mrs.	Alabama School	Fifth grade
Burrell, Carolyn M.	Perkins Institution	Kindergarten
Burton, Fred	Tennessee School, Colored	Band
Bushan, Violet	New Mexico School	Girls' Industrial, physical education
Bussing, Jeannette G.	Connecticut School	Home economics
*Butler, Loretta E.	New York Institute	Sixth grade
Butler, Stahl	Supt., Virginia School, Colored	
*Byrd, Julia	Mississippi School	Braille music notation, librarian
Caldwell, Georgia	Oklahoma School	Piano—beginners
*Caldwell, J. H.	Texas School	Tuning
Callahan, Mary C.	New York State School	Fifth grade
Callahan, Mary D., Mrs.	Montana School	Director of music
*Callahan, P. W.	Montana School	Head teacher, vocational, high school
Campbell, Betty	Kansas School	Girls' physical education
Cannell, Elizabeth, Mrs.	Washington School	High school science, arithmetic
Cantrell, Chloe	Tennessee School	English, American literature
Cantrell, Ovie	Tennessee School	Typewriting, shorthand, dictaphone

Name	*School*	*Subjects or Grades Taught*
CAPEN, LOUISE	Royer-Greaves School	Arithmetic, geography, history, modeling
*CAREY, HAROLD	Minnesota School	History
*CAREY, WILLIAM	W. Virginia School	Caning, piano tuning
*CARLISLE, CLARA	Texas School	Girls' physical education
CÁRMELITA, M., SR.	St. Mary's School	Music
CARPENTER, ELIZABETH	Missouri School	Fourth grade
CARR, FLORENCE	New York Institute	Useful vision, lower school
CARR, O. F., M.D.	Supt., Mississippi School	
CÁRROLL, MARTHA	Tennessee School	Violin
CARTER, BIRDIE LEE	Arkansas School	Primary
CARTLEDGE, MAUDE	Texas School	High school English
CATERINO, AMELIA	Royer-Greaves School	Reading, writing, English, knitting
CATHERWOOD, MARY	Indiana School	Grades 3-4
CATLEY, J. S., MRS.	Louisiana School, Colored	High school, music
CAUFFMAN, JOSEF G.	Supt., Michigan School	
CELINE, M., SR.	St. Mary's School	Industrial
CHADDERDON, W. E.	Louisiana School	Science, mathematics
CHAMBERLAIN, WILLIAM E.	California School	Singing
CHANDLER, ELEANOR	Mississippi School	Harmony, rhythm band
CHANDLER, SHARLIE M.	Perkins Institution	Sewing, caning
CHAPMAN, JEANNE E., MRS.	Supt., Washington School	
CHATFIELD, ALICE	Ohio School	First grade
CHENEY, EDITH	North Dakota School	Music—piano, chorus
CHILDS, S. S.	Washington School	High school mathematics
*CHILES, STAFFORD	Maryland School	Caning, shop work
CHRYSLER, JOSEPHINE L.	Pennsylvania Institution	Latin
CINOTTO, NIDA MAE	Kansas School	Typewriting
CLACK, CORNELIA	Montana School	Academic, typewriting
CLARK, J. S., DR.	Supt., Louisiana School, Colored	
CLARK, M. EDNA, MRS.	Supt., Kansas School	
CLIFFORD, LOIS	W. Pennsylvania School	Girls' handwork
COBB, MARIE H.	W. Pennsylvania School	Girls' physical education
COLE, ANNA B.	Ohio School	Clothing
COLE, BETTY D.	Illinois School	First grade, kindergarten
COLE, VIRGINIA	Perkins Institution	Weaving
COLLETTE, CHESTER	W. Virginia School	Grades 4-5
*COLLIER, MARGUERITE	Texas School	Second grade
COLTRANE, BESSIE	North Carolina School	Grades 2-3
*COLVIN, MABEL	Pennsylvania Institution	Machine sewing
CONNELLY, LOREN	Oklahoma School	Woodworking
COOK, DOROTHEA	Missouri School	Sixth grade
COOK, I. MILTON	Tennessee School	Voice, chorus
COOPER, LARENE	Utah School	English, typewriting
COOPER, LOUISE	W. Pennsylvania School	Braille shorthand, braille
*CORNELL, BLANCHE	Wisconsin School	Piano
CORR, T. R.	Oklahoma School	High school
COURTNEY, B. M., MRS.	Texas Institute, Colored	Director of music, piano
COVILLE, M. GENEVIEVE, MRS.	Prin., Virginia School	
COWGILL, A. G.	Prin., Pennsylvania Institution	
*COX, ALLEN	Pennsylvania Institution	Assistant, boys' physical education
COX, C. G.	North Carolina School	Orchestra, tuning
COX, LOIS V.	Maryland School	High school, home economics

Name	*School*	*Subjects or Grades Taught*
Crampton, Nancy	Indiana School	Grades 5-6
Crandell, C.	Nebraska School	Orchestra, instrumental music
Crawford, Jean	New Mexico School	Grades 2-3
Crenshaw, Mary E.	Kentucky School, Colored	Grades 1-4
Cromwell, Lillian	Oklahoma School	Cooking
*Cronise, J. G.	Virginia School	Tuning
Culton, Ann, Mrs.	Virginia School	Grades 3-4, librarian
*Cummings, Francis J., Ph.D.	Pennsylvania Institution	French, English
Curado, A. D.	Connecticut School	Sloyd
Currin, Gladys	North Carolina School	Second grade
*Currlin, William A.	Pennsylvania Institution	Tuning
Dahme, Agnes	New York State School	Music, dramatics
Daily, Rebecca	W. Virginia School	Sewing, weaving
Damren, Marion L.	Perkins Institution	Basketry
Danforth, Margaret A.	Perkins Institution	Deaf-blind
Danforth, William	New York Institute	French
*D'Arcy, Frances	California School	Lower primary
Daugherty, Ruth	Virginia School, Colored	Advanced
*Davenport, Grace	Oklahoma School	Piano, organ
Davenport, Wahneeta	Florida School	Grades 3-4
*Davidow, Mae	Pennsylvania Institution	Social science
Davis, Finis	Arkansas School	Social science
*Davis, H. Alton	Wisconsin School	High school English, algebra
*Davis, W. E.	Mississippi School	Piano tuning and repairing
DeBoer, Jean	Michigan School	Commercial
*Dellinger, Lena	Virginia School	Primary piano, basketry, knitting
*Deming, H. B.	Washington School	Piano, organ, chorus, brasses
Dennis, C. L., Mrs.	Texas Institute, Colored	English
*Derr, J. W.	Texas School	Boys' physical education
*Deschner, Hilda	Kansas School	Piano
Deweese, Lorine	Illinois School	Voice, girls' glee club
DeWitt, Harriet	Maryland School	Kindergarten
*DiMartino, Matthew	Perkins Institution	Physical education
*Ditzler, Harry	Pennsylvania Institution	Piano, orchestra
Dodd, Margaret H.	W. Virginia School, Colored	Primary
Dodds, Jean H.	Maryland School	Primary grades
Donaldson, Don	Perkins Institution	Salesmanship
Donegon, John	Arizona School	General science
*Donnald, W. W.	South Carolina School	Piano
*Dornblum, Isaac	Pennsylvania Institution	Social science, history
Dorrington, Lottie E.	W. Pennsylvania School	Grades 7-8
Dougherty, Blanche	Oklahoma School	High school
Dowdell, W. C., Mrs.	Alabama School	Grades 6-7
Downs, Clyde L.	New York Institute	Boys' physical education
Doyne, J. J.	Supt., Arkansas School	
*Drennen, Wade	Iowa School	Violin
Driggs, Burton W.	Supt., Idaho School	
Driggs, Frank M.	Supt., Utah School	
*Drinkworth, Ruth	W. Virginia School	Piano, senior chorus
Dry, Walter R.	Supt., Oregon School	
Dudley, Carolyn, Mrs.	Colorado School	Elementary sewing, cooking
Duffy, Charlotte	New York State School	Kindergarten, primary
Duke, Nettie P., Mrs.	Tennessee School	English 7-9, history 7-8
DuMez, Marjorie	Michigan School	English, French
Duncan, Mary Willye	North Carolina School	Voice

Name	*School*	*Subjects or Grades Taught*
DUNN, ELIZABETH	Florida School	Grades 1-2
DUSTIN, NITA FORD	New York State School	High school—English, German, mathematics
*EADES, OTIS	Kentucky School, Colored	Band, caning, woodworking, tuning
*EASTMAN, M. ALBERTINA	Perkins Institution	Speech correction
EATMON, IDA PEARLE	North Carolina School	Fourth grade
EBERHARDT, ALFRED	Missouri School	Physical education
EDWARDS, ETHEL	Tennessee School	Second grade
EGGLESTON, KATHARINE	New York Institute	Mental testing
EGGLESTON, LESLIE	New York Institute	Intermediate algebra
*EICHER, GROVER W.	Ohio School	Caning
EISENBERG, M. CAROLINE	Virginia School	Grades 1-2, corrective speech
ELLIOTT, RUTH	Oklahoma School	Public speaking, girls' physical education
ELLIS, EMILY F.	New York Institute	Third grade
ENGELHARD, GREGORY	California School	Boys' physical education
ENGLER, CARL J.	Wisconsin School	Typewriting
ENNIS, EDNA H.	Perkins Institution	Deaf-blind
ERICSON, MARJORIE V.	W. Pennsylvania School	Kindergarten
ESPEY, W. W.	Tennessee School, Colored	Shop work, chair caning, broom, mop and belt making, physical education
ESTILL, AGATHA E.	W. Virginia School	Piano
EVANS, ETHEL D.	Perkins Institution	Sixth grade
EYMARD, M., SR.	Supt., St. Mary's School	High school
EYRING, DOLORES	Ohio School	Girls' physical education
FAILING, LUCILLE	California School	Adjustment class
*FARRAR, HARRY	New York Institute	Chair caning
FARRELL, GABRIEL, D. D.	Director, Perkins Institution	
*FAULCONER, NELL	Oklahoma School	Domestic science assistant
*FELECIANO, RALPH F.	Perkins Institution	Deaf-blind
FENNELL, KATHLEEN	Virginia School	Second grade, typewriting
FENTON, HERBERT	Missouri School	Boys' piano, organ, harmony, chorus
*FERGUSON, LUCILLE	Florida School	Grades 8-9
FERGUSON, MARY H.	Perkins Institution	Commercial
FERRIS, MILDRED MELTON	Idaho School	Lower grades, music
FEY, VIOLET	Iowa School	Physical education
FINKELSTEIN, RHODA B.	Perkins Institution	Second B grade
FINLEY, V. RUTH	South Carolina School	High school
FISH, MILDRED	Washington School	Physiology
*FISHER, GERTRUDE	North Carolina School	Piano
FISHER, J. S.	Louisiana School	Director of music, band, chorus
FITTS, BRENDA	New York Institute	Girls' physical education
FITTS, HENRY K.	New York Institute	English
FLEMING, MARY T.	W. Pennsylvania School	Kindergarten
FLOOD, LEO J.	Illinois School	Latin, French
FLORIG, JEAN B., MRS.	Royer-Greaves School	Spelling, typwriting, caning
FLOYD, ESTHER	New York Institute	Useful vision, lower school
FONTENOT, Y. L.	Pres., Louisiana School	
*FORBES, JOHN D.	Pennsylvania Institution	Librarian
FORD, E. S.	Tennessee School	Mathematics, geography
FORD, E. S., MRS.	Tennessee School	Intermediate grades

Name	*School*	*Subjects or Grades Taught*
Fortner, L. W.	Oregon School	High school—science, commercial
Foster, Doris E.	New York State School	Home making, industrial arts
Foster, Sarah	North Carolina School	High school—Latin, English, history
*Fowler, Elwyn H.	Perkins Institution	Piano tuning
*Fowler, James	South Carolina School	Shop work, piano tuning
Foxx, Martha M., Mrs.	Piney Woods School	Kindergarten-grammar grades
Frampton, Merle E., Ph.D.	Prin., New York Institute	
Fransham, Lois M.	Idaho School	Home economics, social science
Francis, Ann	Illinois School	Girls' industrial work
Frankel, Ruth	Perkins Institution	Deaf-blind
*Franksen, Theodora	Illinois School	Grades 5-6 (girls)
*Fraser, George E.	Connecticut School	Industrial, boys' physical education
French, R. S., Ph.D.	Supt., California School	
Fricker, August	New York State School	Music
*Fries, Emil	Washington School	Shop, piano tuning
Frush, Ruth	Kansas School	English, domestic science
Fry, Kenneth	Kansas School	Grades 7-8
*Fulton, James	Louisiana School	Boys' industrial work
Ganey, J. S.	Prin., Alabama School	
Garland, J. P.	Tennessee School	Manual training (boys)
Garland, J. P., Mrs.	Tennessee School	Third grade
Garris, Ruby	North Carolina School	Kindergarten
Gaskin, Rebecca	North Carolina School	English, history (high school)
Gellerman, Beth	New York Institute	Useful vision, upper school
Gerber, Louis	Florida School	Orchestra
*Gerlach, George W.	Illinois School	Piano, organ
German, Mildred	North Carolina School	Typewriting
Gibbons, Doris	Connecticut School	Dancing
Gibson, Chester A.	Perkins Institution	Science, poultry husbandry
Gift, Katherine E.	W. Pennsylvania School	Chorus, vocal music
Gill, W. Crabin	Virginia School	Fifth grade, boys' physical education, older boys' supervisor, "Y" counselor
Gilles, Frank	Colorado School	Vocal music
Gilliam, Ira	Oklahoma School	Industrial, broom making
Gillilan, Carmen	Oregon School	Intermediate grades
*Glenn, Mary F.	Maryland School	Librarian, switchboard
Glover, D. W.	Prin., Arkansas School	Social science, mathematics
Glover, D. W., Mrs.	Arkansas School	Girls' industrial arts
Glynn, George	New York Institute	French
*Godshall, Loree, Mrs.	South Carolina School	High school
Goetz, Anton	Oklahoma School	Orchestra
Goggans, Lula Ruth	Alabama School	Typewriting
Goldberg, Michael M.	New York State School	Physical education
Golladay, R. M.	Prin., W. Virginia School	Algebra, arithmetic
Good, Milton	Kansas School	Boys' physical education
Goodman, David V.	Pennsylvania Institution	Mathematics, hygiene, science, biology, poultry husbandry
*Goodrich, Frank	Michigan School	Piano tuning, stereotyping
*Goodrich, Lucile	Michigan School	Braille
*Govan, Elwood	Pennsylvania Institution	Machine sewing
Grant, A. D., Miss	Texas Institute, Colored	Public school music, voice

Name	*School*	*Subjects or Grades Taught*
*Grantham, Bernice	Arkansas School	Elementary
Grass, Ruby I.	Pennsylvania Institution	Expression, declamation, dramatics
Graves, Maude B.	Virginia School, Colored	Intermediate, music
Gray, Sara	Tennessee School	Speech arts, girls' physical education
Greaves, Jessie Royer, Mrs.	Supt., Royer-Greaves School	
*Grebner, Joseph	Minnesota School	Piano tuning, chair caning
Green, S. M.	Supt., Missouri School	
Green, Sylvania, Mrs.	South Carolina School	Grades 4-5
Green, W. H.	South Carolina School	Violin
*Greene, V. C.	Texas Institute, Colored	Assistant, broom, mattress and mop making, chair caning
*Grew, Marion, Mrs.	Washington School	Grades 1-4
*Grider, Charles B.	Alabama School	Shop—broom and mop making, caning
Grier, Helen	North Carolina School	Third grade
Griffin, H. C.	Prin., North Carolina School	
Griffin, Mary	North Carolina School	Sixth grade
Gring, Naomi K.	Perkins Institution	Piano
Gunderson, Charles	New York Institute	Radio
Gunderson, Helen	Minnesota School	Primary
Hagins, Sadie	North Carolina School	Handicrafts
Haglund, Ruth	New York Institute	Kindergarten
Hahne, Hazel, Mrs.	Wisconsin School	Geography
*Hall, Elizabeth	Washington School	Primary grades
Hall, Inis B.	Perkins Institution	Deaf-blind
Hallett, Gertrude B.	New York State School	Third grade
Hamblin, Clara	Oklahoma School	Director, home economics
Hamilton, Dale W.	Illinois School	Science, mathematics
*Hamilton, Edwin	Iowa School	Chair caning, broom making
Hamlin, Vetta H.	Ohio School	Piano, organ, junior chorus
*Hamm, G. S.	Alabama School	Piano tuning
Hammond, May	Michigan School	Kindergarten, deaf-blind
Hamrick, Ruby, Mrs.	Virginia School	Sight saving
Hanna, Nelle	North Carolina School	Dean of music, piano
Hanshaw, Charlotte	Wisconsin School	Home economics
Hanson, Marie	New York Institute	Opportunity class, upper school
Hardesty, Gertrude	Indiana School	Home economics
Hardy, A. J.	Alabama School	Agriculture, shop
*Harlow, Gertrude S.	Perkins Institution	Braille
Harmeyer, Arthur	Indiana School	High school mathematics, general science, English 9-10, arithmetic 8, physics 7-8
Harrington, Frances	Nebraska School	Industrial work, arithmetic, elementary
Harris, Augusta	North Carolina School	Beginners, first grade
Harris, Bess	South Carolina School	Grades 3-4
Harris, Edward, Mrs.	Catholic Institute	Dramatics, elocution
*Harris, Travis	Oklahoma School	Piano tuning
Hart, Annie Kate, Mrs.	Mississippi School	Piano, voice
Hart, Elizabeth C.	Perkins Institution	Piano
Hart, Lilian	Michigan School	Opportunity class
Harter, Mildred E.	Washington School	Grades 5-6, German
*Hartman, Anna K.	Pennsylvania Institution	Second grade

Name	*School*	*Subjects or Grades Taught*
HARTMAN, DOROTHY	Pennsylvania Institution	Grades 3-4 (boys)
*HARTUNG, HERBERT	Pennsylvania Institution	Caning, brush making
HARTWELL, JOHN F.	Perkins Institution	Piano, organ
HARVEY, ALICE G.	Idaho School	Upper grades, high school
*HASLIP, MELVIN	Michigan School	Shoe repairing
HEBBELN, H. J.	New Mexico School	High school, impaired vision
HEENAN, MARY	Minnesota School	Librarian
*HEIN, H. E.	Louisiana School	Sixth grade
*HELPPIE, ADELAIDE	Minnesota School	Kindergarten
*HEMSTREET, AGNES	Michigan School	Chorus
HEMUS, MABEL H., MRS.	Colorado School	Director of piano and organ
HICKS, GORDON	Supt., Connecticut School	
HICKS, HELEN	Kentucky School	Second grade
*HICKS, MINNIE E.	Maryland School	French, elementary grades
HICKS, MYRTLE G., MRS.	Mississippi School	Grades 4-5
HIEATT, MARTHA	Virginia School	High school—mathematics, Latin
*HILL, LENAH	Illinois School	Third grade (boys)
HILL, O. J.	Ohio School	Science, English, senior review
HILLI, PAUL A.	Perkins Institution	Handicrafts
HILLWAY, HAZEL ANDREWS	Oregon School	Primary
HILLWAY, TYRUS	Oregon School	High school—English, social science
HINANT, PAUL I. V.	Tennessee School	High school history, vocations
*HINDMAN, MR.	Iowa School	Piano tuning
*HITCHCOCK, IRMA	Illinois School	Piano, singing (primary)
HOARD, SETH W.	New York Institute	Mathematics—high school
HOBART, JOYCE	New York Institute	Second grade
HOFF, PAUL	Minnesota School	Geography
HOFFMAN, BETTY	Arizona School	Commercial
*HOGUE, ED	South Carolina School, Colored	Upper grades
HOLDEN, L. V., MRS.	Texas Institute, Colored	Grades 5-6
HOLLAND, IDA FAYE	Texas School	Director, domestic arts
*HOLLAND, LILLIE	Louisiana School	Elementary piano, chorus
HOLMES, INEZ J.	Wisconsin School	Physical education
HOLMGREN, ANNA	Washington School	Girls' handwork
HOLT, EDITH	Oklahoma School	Typewriting, spelling
HOOFF, VIRGINIA L.	W. Pennsylvania School	High school
HOOVER, RICHARD E.	Maryland School	Mathematics, athletics
HOPKINS, EFFIE LEATH	Connecticut School	Grades 5-6
*HOPPE, RUTH M.	Wisconsin School	Vocal
*HORNER, AUGUSTA	Pennsylvania Institution	Caning, weaving
HOSHOR, MARGARET	Nebraska School	Special teacher, deaf-blind
HOST, ELIZABETH J.	Ohio School	History, hygiene, English, spelling
HOUCK, SCHUYLER	Ohio School	Boys' physical education
HOUGH, BASSETT W.	New York Institute	Director of music
HOUSTON, CHARLOTTE	North Carolina School	Orchestra, violin
HOW, RUTH	W. Virginia School	Voice, junior chorus, braille notation
HOWARD, ROY	Washington School	Junior-senior high school—social science
HOWELL, ELIZABETH	Oregon School	Intermediate grades
*HOYER, FRED C.	Wisconsin School	Manual training, piano tuning
*HUBBS, IRENE	W. Virginia School	Kindergarten, first grade

Name	*School*	*Subjects or Grades Taught*
*Huber, Joseph L.	Missouri School	Wind instruments
*Hulsey, Harry	Alabama School	Elementary grades
Hunt, Fred A.	W. Pennsylvania School	Boys' physical education
Hunter, M. L.	Tennessee School, Colored	Grades 8-12
Huntley, Ethel	New York State School	Seventh grade
Hurst, A. D.	North Carolina School	High school—science, mathematics
*Hurt, Maxine	Tennessee School	Piano
*Hurt, W. C.	Ohio School	Band, orchestra
Hutcherson, Bettie S.	Mississippi School	Orchestra director
Hutton, Margaret	New York Institute	Kindergarten
*Hyatt, Mary Bell	Louisiana School	Piano, organ
Ieule, John	Michigan School	Orchestra, student assistant
Isgrigg, Georgia	Indiana School	Voice, piano
Ivins, Daphne	New Mexico School	Violin, orchestra
*Jablonske, Joseph E.	Perkins Institution	Deaf-blind
*Jackson, Julia	Kentucky School	Reading, arithmetic, writing
Jackson, Norvella	Texas Institute, Colored	Social science
James, Annie L.	Oklahoma School	Pre-primary
*James, Frank	Ohio School	Broom making
James, Joe F., Mrs.	Texas School	Director of music
James, Virginia	North Carolina School	Seventh grade
Jefferis, H. G.	Oregon School	Industrial (boys), physical education
Jeffrey, Herbert D.	Supt., North Dakota School	
*Jenkins, Edward W.	Perkins Institution	Harmony
Jenks, Sara	Washington School	Cello, piano, chorus, rhythm band, harmony, history, orchestra
*Jensen, Thomas	North Dakota School	Industrial
Johnson, Ella	Iowa School	First grade
*Johnson, Emma	Idaho School	Piano
Johnson, Frances	Minnesota School	Typewriting, intermediate
Johnson, Hugh D.	Maryland School	Elementary grades
*Johnson, Jennie E.	Nebraska School	Reading, writing, spelling, language
Johnston, Marjorie A.	Perkins Institution	Instrumental music
Joice, B. S.	Supt., W. Pennsylvania School	
Joice, Marjorie L.	Perkins Institution	Fourth grade
*Jones, Albert	Kansas School	Tuning, voice
*Jones, Alberta	South Carolina School, Colored	Lower grades
Jones, C. E.	Prin., Alabama School, Colored	
Jones, Laurence C.	Supt., Piney Woods School	
*Jones, Washington D.	Florida School	Grades 1-5
Judkins, R. C.	Louisiana School, Colored	High school, boys' trades
Judd, Mary P.	North Carolina School	Eighth grade
Kallander, Syra	Oregon School	Girls' industrial
Karnan, Gertrude	California School	High school
Kaufman, Charles E.	Colorado School	Grades 10-12
Kearney, Beulah	North Carolina School	Typewriting
Keene, Audrey D., Mrs.	Pennsylvania Institution	Grades 3-4 (girls)
Kelly, Dana	Prin., Utah School	Mathematics, science
Kempton, Noel	New York Institute	Voice
Kennedy, Irene	Michigan School	Third grade
Kieft, Maurice	Michigan School	Manual arts

Name	*School*	*Subjects or Grades Taught*
Kiler, Olive	Indiana School	Stringed instruments
*Kimbel, Ethel	Illinois School	Piano
*King, Birdie	Texas School	Music
King, Etta F.	W. Pennsylvania School	Commercial
Kingstedt, Lilly	Iowa School	Piano
Klug, Mercedes	South Dakota School	Grades 5-8
Knight, Mildred	Washington School	Grades 4-5
Koch, Faith C.	Missouri School	Domestic arts
*Koegl, Ruby	Louisiana School	Assistant, primary
Koehne, Grace	Indiana School	English 7, 9-11, physiology 8, typewriting 7-8, French
Koger, Inez W., Mrs.	Florida School	Violin, orchestra, piano
Kohn, Joseph	Perkins Institution	English
Kohoutek, Carolyn	New York Institute	Second grade
Kowiak, John	New Mexico School	Boys' physical education
Kramer, Helen	Ohio School	Biology, French, Latin, English
Krause, A. E.	Supt., W. Virginia School	
*Krebs, Joe	Texas School	Director of shop
Kummerow, Sybil, Mrs.	Wisconsin School	Home economics
*La Flamme, Berenice	California School	Piano
Lambert, Robert	Supt., Indiana School	
Landis, M. B.	Iowa School	Manual training, physical training
Landis, M. B., Mrs.	Iowa School	Sewing, home economics
*Landreth, Eugene	Alabama School	Director of band
Landry, A. C.	Louisiana School	Broom making
Langan, Paul J.	Prin., Maryland School	
Larkin, Louise	Kentucky School	Fourth grade
*Larsen, Olaf L.	New York Institute	Business law
Larson, Mrs.	Iowa School	Weaving, basketry
*Leberman, H. N.	Texas School	Orchestra
Ledbetter, Joe	Alabama School	Broom and mop making, caning
Lee, Jerry M.	W. Virginia School, Colored	Fifth grade, mop and broom making
Lee, Tennie M.	Oklahoma School	Grades 1-2
Leedham, Norman	New York Institute	Social science
*Leider, Alice	Minnesota School	Sewing
Leive, Mabel	Indiana School	Piano
Leonard, M., Sr.	Catholic Institute	Sight conservation, sewing
Leonardo, Romulus	Pennsylvania Institution	Woodworking
Lemons, Geneva	Colorado School	Primary, first grade
Levar, Mary	California School	Lower primary
Levy, May H.	W. Pennsylvania School	Sixth grade
Lewars, Ralph P., Mus. D.	Pennsylvania Institution	Piano, organ, theory, chorus
*Lewis, John	New York Institute	Flute
Lewis, Susan	Missouri School	Second grade
Liechty, Howard	New York Institute	Science
*Lien, Marie	Minnesota School	Braille, basketry
*Lien, Torger	Minnesota School	Rug weaving
Line, Marian E.	Florida School	Spanish
Lineberry, G. E.	Supt., North Carolina School	
Linn, Vincent	Supt., South Dakota School	
Little, Roberta	Oklahoma School	Grades 5-6
*Locuson, Agnes	Pennsylvania Institution	Knitting

Name	*School*	*Subjects or Grades Taught*
LONG, SARAH V.	Pennsylvania Institution	Commercial
LONGANECKER, F. M.	Supt., Wisconsin School	
LONGSDORF, KENNETH D.	New York Institute	English
LOUIS, M., SR.	St. Mary's School	Grades 1, 4, 5
*LOW, CLIFFORD	New York Institute	Weaving
*LUCCHINI, RUTH E.	Connecticut School	Eighth grade, high school
*LUITON, DORIS	New York State School	Kindergarten assistant
LYONS, JOE	Maryland School, Colored	Boys' industrial
LYSEN, J. C.	Supt., Minnesota School	
MACDONALD, GERTRUDE A.	Perkins Institution	Deaf-blind
*MACDONALD, THOMAS	Royer-Greaves School	Stringed instruments
MACLEAN, RONALD	Illinois School	Algebra 1, English 8, boys' physical education, swimming
MCALONEY, ELIZABETH H.	Colorado School	Grades 2-3
MCATEE, IRMA	Iowa School	English
MCAULEY, JAMES H.	Ohio School	Broom making, head of vocational department
MCBRIDE, ADA	Colorado School	Sewing, needlework
MCBRIDE, HELEN	Kentucky School	Chorus
*MCCANN, THOMAS O.	Virginia School, Colored	Primary, broom and mattress making, chair caning
MCCAVICK, LORETTA	Iowa School	Mathematics
MCCLUNG, R.	Texas School	Typewriting
MCCLURE, HYMA	Nebraska School	Geography, English, history, spelling
MCCLURE, LOUISE	Missouri School	High school, beginners' typewriting
MCCOY, JULIA C., MRS.	Mississippi School	Spoken English, piano, typewriting
MCCRACKEN, J. C.	Arkansas School	Piano tuning, repairing
MCCRACKEN, J. C., MRS.	Arkansas School	Elementary
*MCCREIGHT, JOHN	South Carolina School	Grades 4-5
MCDOUGAL, VIRGIE	Arkansas School	Assistant, girls' industrial arts
MCELMURRY, O., MRS.	Arkansas School	Physical culture, typewriting, speech
MCELMURRY, OSCAR	Arkansas School	Boys' industrial arts
MCFERRIN, PAUL LUTHER	Tennessee School	Piano, organ, harmony
MCGAW, FRANCES L.	Perkins Institution	Sewing
MCGUIRE, ROSE	Illinois School	Second grade
MCKAY, F. H.	Idaho School	Music, orchestral instruments
*MCKENZIE, MARGARET A.	Perkins Institution	Knitting
MCMANAWAY, H. M.	Supt., Virginia School	
MCNEIL, LON	Supt., Oklahoma Institute, Colored	
MABEY, JULIAN H.	Perkins Institution	Handicrafts
MACKIE, D. ELDON	Iowa School	English, history
MACKIE, STELLA	New York Institute	Opportunity class, lower school
MAGEE, CHARLOTTE	W. Pennsylvania School	Fourth grade
*MAHAN, LUCILE	Alabama School	Piano
MANCE, ARLINE	New York Institute	German
MANDIGO, JERRY	Michigan School	Agriculture
MANLEY, MARGUERITE L.	Perkins Institution	First grade
MANN, SADIE	Virginia School	Director of music, piano, voice, harmony, theory
MANNING, MAUDE L.	Iowa School	Piano
*MARANUZZI, JOHN	Catholic Institute	Music, theory

Name	*School*	*Subjects or Grades Taught*
*Mark, Ada E.	North Dakota School	Kindergarten
Marshall, Lillian	Ohio School	Arithmetic, English, law, salesmanship
Marshall, Willette	Tennessee School	Intermediate grades
Martin, Gertrude	New York Institute	Piano
Martin, Hazel	North Carolina School	Voice, public school music
Martin, J. D.	Supt., Texas Institute, Colored	
Martin, Jane	New York Institute	Fourth grade
Martino, Rae	Arizona School	Health education, dancing
Martz, Elsa B., Mrs.	Perkins Institution	Sixth grade
Maslow, Ruth	New York Institute	Third grade
Mathis, Alice	Illinois School	Piano
Matson, Marjorie	Nebraska School	Music
Maxwell, Neale L., Miss	Pennsylvania Institution	Grades 5-6
Mayberry, M. F.	Tennessee School, Colored	Grades 4-7, girls' handicrafts
Mayshark, Jessie W., Mrs.	Perkins Institution	Special class
Meadors, G. F.	Prin., Mississippi School	Mathematics, science
Means, Anna K.	Wisconsin School	Piano
Meaux, Paola	Louisiana School	French, reading 7, English 7
*Meek, Nettie	Illinois School	Violin
*Meldrum, John	Oklahoma School	Director of music
Melvin, Alice	Kansas School	Grades 1-2
*Meyers, Frederick G.	Illinois School	Violin, orchestra
Meyers, Mabel G.	Illinois School	Grades 7-8
Michael, Albert	Virginia School, Colored	Band instructor and director
*Michaud, Armand J.	Perkins Institution	Languages
*Micklus, Florence A.	Wisconsin School	Language, intermediate grades
Miles, Guy S.	Tennessee School	Boys' physical education
Miles, Guy S., Mrs.	Tennessee School	Vocal music
*Miller, Margaret	Perkins Institution	Remedial work
Milligan, Katherine	Illinois School	Sight saving, grades 5-8
Mills, Bette	Kansas School	Expression
Minnis, Elizabeth	Kentucky School, Colored	Music, typewriting
Mitchell, Paul	New York Institute	Science
Mohn, Florence	Iowa School	Kindergarten
Monroe, C. V., Mrs.	Texas Institute, Colored	Grades 3-4
Montgomery, Euclid	Kentucky School	History, foreign languages, civics, English
Moody, Josephine	New York Institute	First grade
*Moore, Alice	Washington School	Primary grades
Moore, M. E., Miss	Arkansas School	English
Morey, Constance	Pennsylvania Institution	Mathematics, upper grades
Morgan, David H.	California School	Junior high school
Morgan, M., Mrs.	New Mexico School	Grades 6-7
*Morgan, Myra	New York State School	Braille
Moriarty, Catherine T.	Supt., Kentucky School	
Morrison, William	New York Institute	Social science
Morrow, Robert D.	Supt., Arizona School	
Morse, Susan E.	Perkins Institution	Second grade
Moser, Marjorie	South Dakota School	High school
Mucklow, Emily Holt	Connecticut School	Dramatic art
*Mulligan, Robert	New York State School	Manual training, industrial
*Mullins, Leila	Texas School	Opportunity class
Myers, Mary Jane	Pennsylvania Institution	English, Latin
Nass, Helen L.	Perkins Institution	Physical education

Name	*School*	*Subjects or Grades Taught*
*Navey, Ralph	North Carolina School	Chair caning, mattress making
Neal, Paul L.	Perkins Institution	History
*Nelson, Dorothy	New York Institute	Braille
Nestell, Ethel	Oregon School	Supervising teacher
*Nestor, Margaret	W. Virginia School	English, Latin
Newman, Elizabeth	Illinois School	Fiber furniture making, basketry, woodworking (boys)
Newman, Grace E.	New York State School	Primary, kindergarten
Newman, Oscar	New Mexico School	Eighth grade, impaired vision
Nicholls, Feodore, M.	Perkins Institution	Third grade
*Niday, W. R.	Prin., Ohio School	Algebra, American history, world history
Nielsen, Aksel	Minnesota School	Physical education
*Nielsen, Einer	Nebraska School	Advanced science and mathematics, economics, history
Nielsen, Melva, Mrs.	Minnesota School	Piano, voice
Nilsson, N. Maurine	Perkins Institution	Deaf-blind
Norris, Alberta	Maryland School, Colored	Primary grades
*Norris, Nora	North Carolina School	Assistant, kindergarten
Nowatski, Edith	Illinois School	Physical education and swimming (girls)
Nowatski, Homer F.	Wisconsin School	Broom making
Nowell, Ruth	North Carolina School	Piano
Nygard, Mae	Wisconsin School	Mentally retarded, primary
O'Bar, Roy	Oklahoma School	Dairying
Oberly, L. Elizabeth	Prin., W. Pennsylvania School	
*O'Brien, Mary L.	Wisconsin School	Braille
Ockenga, Angie	W. Pennsylvania School	Second grade
*Ohnstad, Karsten	Minnesota School	Assistant librarian
Oliphant, G. F.	Supt., Georgia Academy	
Oliver, Elizabeth C.	Perkins Institution	Home economics
Oliver, Jack	Kansas School	Orchestra
Oliver, Kathleen G.	Connecticut School	Industrial (girls)
O'Neill, P. Leroy	Prin., Wisconsin School	
Onion, Edyth G.	Maryland School	Chorus, vocal music
Ord, Ellen F.	California School	Home economics
Ord, Mary N.	California School	Adjustment class
Overbeay, Donald	Illinois School	Grades 5-6 (boys)
*Owen, Harold	Arizona School	Beginning braille and music
Owens, Anna E.	New York State School	Fourth grade
Page, Mona A.	W. Virginia School, Colored	Home economics
*Painter, Marvin L.	W. Virginia School	Geography, arithmetic, English
Palmer, Eber L.	Supt., New York State School	
Palmer, F. E.	Supt., Iowa School	
Palmer, Mona E.	California School	Typewriting
*Parent, Elva	Louisiana School	Assistant, primary
*Parent, Ila	Louisiana School	Fourth grade
Parker, Joseph C.	W. Pennsylvania School	Boys' industrial
*Parker, Lula	Texas School	Librarian
Parkinson, LaRue	Utah School	Primary
Parnell, Jewell	Florida School	Grades 6-7
Parr, Annie Ruth	Tennessee School	Piano
Patrick, M., Sr.	St. Mary's School	Eighth grade
*Pattillo, Elizabeth	Maryland School	Head of music department, piano

Name	*School*	*Subjects or Grades Taught*
PAYTON, EULA	Texas School	Sixth grade
PEART, GLADYS R., MRS.	Perkins Institution	Commercial
PEART, KATHLEEN, MRS.	Mississippi School	Girls' industrial
PELONE, ANTHONY J.	New York State School	Typewriting
PENICK, ROSA	Texas School	Seventh grade
*PERRY, NEWEL	California School	Director of advanced studies
PETERSON, EDNA F.	Prin., Washington School	English, languages
PETERSON, EDWIN G.	Supt., Montana School	
*PETZINGER, L. J.	Ohio School	Basketry, brush making, industrial arts
PETTIT, MAUDE	Michigan School	Grades 5-6
PFLEGER, MARTHA	Pennsylvania Institution	Girls' physical education
PHELAN, FLORENCE L.	New York Institute	Seventh grade
PHILIPS, MARGARET	Pennsylvania Institution	First grade
PHILLIPS, MARY	Missouri School	Girls' piano, musical history
PHIPPS, MIRIAM A.	Perkins Institution	Weaving, basketry
POPLIN, VELMA	North Carolina School	First grade
POPOVICH, DANIEL	California School	Supervisor of music
PORT, G., MRS.	Iowa School	Music
POSEY, C. L., MISS	Texas Institute, Colored	Beginners' piano
POST, DOROTHY	Virginia School	High school English and psychology, corrective physical education, Girls' Reserve counselor
POSTON, NANNIE	Prin., Louisiana School	Primary
POSZ, HELEN	Minnesota School	Sight saving
POTTER, CLAUDIA	Perkins Institution	Spoken English
PRATT, CLARA L.	Perkins Institution	Social science
*PRICE, IDA E.	Pennsylvania Institution	Sixth grade (girls)
*PRIESTER, BESSIE	Alabama School	Piano (beginners)
PRINE, OLIVE	Minnesota School	Mathematics
PROPHET, LOIS	Mississippi School	Girls' physical education
PURCELL, EDITH	Idaho School	Basketry, arithmetic, physiology
PURCELL, GLADYS	W. Virginia School, Colored	Intermediate grades, music
QUIMBY, NEAL F.	Pennsylvania Institution	Boys' principal teacher, boys' physical education
RALSTON, MARGARET E.	Connecticut School	Music
RAMSEY, CHARLES	Arizona School	Health education, athletics
RANSOM, GEORGE P.	Mississippi School	Boys' industrial
RARICK, SUSIE	Kentucky School	Kindergarten, first grade
*RASPBERRY, EMILY	W. Virginia School, Colored	Arithmetic, writing
RAYMOND, ALBERT R.	Perkins Institution	Voice
READ, FLORRIE, MRS.	Alabama School	Sewing
REAGAN, HOYT	Michigan School	History
REED, HARVEY G.	Virginia School	Science, history; scoutmaster, older boys' supervisor
REED, MARY	Illinois School	English
REEDER, MARY LU	Iowa School	Piano
REESS, S. GERTRUDE	Pennsylvania Institution	Piano, solfeggio, glee club
*REEVE, FRED	New York Institute	Deaf-blind
REID, MRS.	Iowa School	Second grade
*REINBECH, JOSEPHINE	Missouri School	Kindergarten, first grade
*REMBERT, WALTER W.	Florida School	Grades 6-10
*RENSHAW, QUENTIN	Nebraska School	Industrial
REYNOLDS, FLORENCE	Indiana School	First grade

Name	*School*	*Subjects or Grades Taught*
*Reynolds, Leonard	Virginia School	Shop work; older boys' supervisor
Rhoades, William	Indiana School	Woodworking
Ricard, Felice	Louisiana School, Colored	Primary
*Rice, B. P.	Tennessee School	Band, tuning
*Rice, Carl	New York Institute	Piano tuning
Richarda, Sr.	Catholic Institute	Grades 6-8
*Richardson, Clarence	Illinois School	Basketry, upholstery, auto mechanics
*Richie, Samuel	Kentucky School	Piano, band, choir
Rickell, Wanda	Arizona School	Chorus, French
Rickey, Helen	Kansas School	Grades 5-6
Ricks, Lillian	Alabama School	Beginners, low first
Riddle, D. Hardy	Supt., Alabama School	
Roach, Helen	Oklahoma School	Grades 3-4
Roberson, Lucy A., Mrs.	Mississippi School	Grades 6-7
*Roberts, C. Nevison	Michigan School	Organ, piano
*Roberts, Edward	Ohio School	Tuning
Roberts, Harry	Indiana School	Vocational, 3-12
Robertson, Laura B.	South Carolina School	Grades 1-2
Robinson, M. L., Mrs.	Texas Institute, Colored	Intermediate piano
Robinson, Ruth	New York Institute	Eighth grade
Rodger, Dorothy L.	Perkins Institution	Piano
Roebuck, Antoinette	Texas School	Voice, organ
*Roepke, Virginia C., Mrs.	Alabama School	Director, music department, organ, voice
Roethe, William	Colorado School	Violin, orchestra
Rogers, Edith M.	Maryland School	Violin
Rogers, Helen	Maryland School	Elementary grades
Rollins, O. B., Mrs.	Texas School	Fourth grade
Romine, N. M., Mrs.	New Mexico School	High school
Romine, Nicholas	New Mexico School	Boys' industrial, impaired vision
*Roof, Jayne O.	Maryland School	Primary, elementary grades
Roots, Frances M.	Perkins Institution	Recreation
Rosenthal, Ruth	New York Institute	Useful vision, upper school
Ross, Isabelle S.	Utah School	Physical education, oral expression
Ross, Mary	Ohio School	Fourth grade
*Roten, Kelton	W. Virginia School	Science, salesmanship, sixth grade
Roy, R. B.	Louisiana School	Fifth grade
*Roznowski, Frank	Michigan School	Broom making, weaving
Rule, Elsie A.	New York State School	Music
Runnels, Oscar	Mississippi School	Boys' physical education
Russel, Miriam	Illinois School	Sight saving, grades 1-5
Russell, Georgiana	Michigan School	Fourth grade
*Russell, Lillian M.	Connecticut School	Kindergarten
Ruth, Natalie	Pennsylvania Institution	Household arts, sewing
Ryan, Arthur J.	New York Institute	Vocational guidance
Ryan, Euphrosyne M.	Florida School	Music
Ryan, John L.	Iowa School	History, physiology, biology, outdoor sports
Ryan, Mary	New York Institute	Deaf-blind
Samuelson, Rose	North Dakota School	Primary
*Sanderfer, W. W.	Texas School	Shop assistant

Name	*School*	*Subjects or Grades Taught*
*Sanders, Frank	Oregon School	Music
*Sandy, L. L.	North Carolina School	Chair caning, mattress making
Sankey, Anna McClain	Missouri School	Speech
Sansom, Anna May	Iowa School	Music
Sassa, Fred	Catholic Institute	Violin, stringed instruments
Scarberry, W. G.	Supt., Ohio School	
Scarborough, A. L., Mrs.	Texas School	First grade
Scarborough, Ida	Iowa School	Braille, phonics
Schaller, Charlotte	Arizona School	Domestic science
Schneider, Martha C.	Kentucky School	Physical training
Schober, Henry	Catholic Institute	Carpentry
Schiddel, C. W.	Colorado School	Piano tuning and repairing
Schmidt, Elinor L.	Ohio School	Piano, chorus, head of music department
Schorpp, Mildred	New Mexico School	Kindergarten, impaired vision, borderline
Schroder, Elizabeth	California School	Upper primary
Schroder, James M.	W. Pennsylvania School	Boys' industrial
Schulmeyer, Louise	Indiana School	Physical education
Scoggan, Lydia	Kentucky School	Arithmetic, U. S. history, physiology
Scoggan, Vernette W.	Kentucky School	Manual arts, domestic science
Scruggs, Hattie M.	South Carolina School	Sewing
*Sears, Ida	Royer-Greaves School	Current events, music
Seeling, Harry	Washington School	Shopwork, woodworking, fibre furniture making
Session, Curtis	Texas Institute, Colored	Broom, mattress and mop making, chair caning
Settles, Clarence J.	Pres., Florida School	
Seversen, Ingeborg	New York Institute	Deaf-blind
Severson, Edna, Mrs.	Minnesota School	English
Seymour, Louise	Perkins Institution	Piano
Shannon, Jack	Oklahoma School	Junior high school (7-8)
*Shannon, W. T.	Indiana School	Piano, organ, theory, wind instruments
Shelton, Leta Jo	Idaho School	Physical education
Shirley, Margaret	Wisconsin School	Third grade
*Shoesmith, Mark	New York Institute	Clay modeling
*Shrader, Edward	W. Virginia School	Broom making
Simonds, Elsie H.	Perkins Institution	Girls' supervisor, English
Singer, Margaret M.	Indiana School	Second grade
Slade, S. W. R.	North Carolina School	High school
Sloan, Louise	Colorado School	Grades 4-5
Small, John D.	W. Pennsylvania School	Orchestra
*Smith, B. F.	Indiana School	Piano tuning
*Smith, Benjamin W.	Perkins Institution	Special class
Smith, Helen	Kansas School	Organ, voice
*Smith, Helen	New Mexico School	First grade
Smith, Laura N.	Maryland School, Colored	Advanced grades
*Smith, Margaret	Arizona School	Beginning braille, music, reading
Smith, N. L., Mrs.	Texas School	Fifth grade
Smith, Pearl P.	Oklahoma School	Braille, librarian
Smoll, M. J., Mrs.	New Mexico School	Director of music
Smoll, P. A.	Supt., New Mexico School	

Name	*School*	*Subjects or Grades Taught*
Snyder, Viola, Mrs.	Tennessee School	Handicrafts, grades 1-4
*Spar, Harry	New York Institute	Poultry husbandry
Spellings, William W.	Tennessee School	High school mathematics and science
Sperry, Dorothy E.	W. Pennsylvania School	Third grade, psychologist
*Spigener, Marion	South Carolina School	Voice
Stackhouse, Vera	Virginia School	Occupational therapy, sewing, girls' physical education, swimming
Starbird, Mabel A.	Perkins Institution	Voice
Starkey, Florence	Ohio School	English, spelling, geography, public school music
Starr, Sophia T.	Maryland School	Sewing, handwork
Stavoe, Margaret B.	W. Pennsylvania School	Fifth grade
Steece, Everett R.	Ohio School	Arithmetic, civics
Steiner, W. K.	W. Pennsylvania School	Director of music
Stell, Ollie	Texas School	Music
Stephany, Ray	New York Institute	Deaf-blind
*Stephenson, H. G.	Illinois School	Piano tuning, radio and electrical apparatus
*Stephenson, Hadley H.	South Dakota School	Basketry, tuning
*Stephenson, Zeola	South Dakota School	Art weaving
Steppan, M. A.	Minnesota School	Band, orchestra
Stewart, Mary	Kentucky School	Advanced piano, music appreciation
Stewart, O. W., Mrs.	Supt., Oklahoma School	
Stiles, Charlotte	Florida School	Fifth grade
Stith, William A., Jr.	Kentucky School	Mathematics, science, English
*Stobbe, Frederick W.	California School	Boys' industrial arts
Stoehr, Dorothy	Wisconsin School	History
Stolz, Elizabeth	Ohio School	Violin, piano, public school music
Stone, Orin A.	Connecticut School	High school
*Store, Mildred	New York Institute	French, German
Strieber, E. M.	Texas School	High school mathematics
*Strom, Arthur	North Dakota School	Voice, violin, tuning
Stubbs, Mabel, Mrs.	Virginia School	Sixth grade
Studt, Lillie	Kansas School	Grades 3-4
Sturdavant, Iris	Michigan School	Grades 1-2
Sufficool, Miss	Iowa School	Typewriting
Suher, Minnie	Royer-Greaves School	English, anatomy, literature, tests
Summers, Mary D., Mrs.	Pennsylvania Institution	Orthogenic backward
Sundstrom, Estyre	North Dakota School	Intermediate
*Sutherland, H. R.	Illinois School	Chair caning, hammock, brush and mat making
Sweeney, Helen	Illinois School	Grades 3-4 (girls)
Swenson, Katherine	California School	Upper primary
*Sylvus, Eleanor C.	Ohio School	Special, braille, adjustment
Tacquard, F. G.	Prin., Texas School	Spanish
*Taferner, Theodore	New York Institute	Regents harmony
Taylor, Josephine L.	Perkins Institution	Fourth B grade
*Taylor, Molissa	W. Virginia School	Grades 1-2, sewing, handwork
Taylor, Reginald	W. Virginia School	Typewriting, vocational director
Taylor, Sarah E.	W. Pennsylvania School	Music

Name	*School*	*Subjects or Grades Taught*
Taylor, Winifred F.	Illinois School	Typewriting, business English
Teller, Norman	Prin., Michigan School	Physical education
Tetzlaff, Iola	Wisconsin School	Mentally retarded, intermediate, high school
Thatcher, Lillian	Utah School	Orchestra
Thayer, Mrs.	Iowa School	Fourth grade
Thayer, Eleanor W.	Perkins Institution	Voice
Theus, I. M., Mrs.	Prin., Louisiana School, Colored	Grades
Thibodeaux, A. M., Miss	Texas Institute, Colored	Science, mathematics
Thode, Elizabeth	New York Institute	Piano
Thomas, M., Sr.	St. Mary's School	Industrial
*Thomason, George M.	Alabama School	Primary
*Thompson, Isaac	Minnesota School	Woodworking
Thomson, Anne	Tennessee School	Kindergarten, first grade
Thomulka, Paul	Royer-Greaves School	Orchestra
*Tiberghein, Lois	Iowa School	Piano
Tillotson, Lucile	Michigan School	Piano
Todd, Lottie E.	Iowa School	Weaving, basketry
Towsley, Grace T.	New York State School	Music
Traub, Margaret S.	Kentucky School	Third grade
*Trebing, Emile	Arkansas School	Dean of music, piano, organ, wind instruments
Trebing, Emile, Mrs.	Arkansas School	Piano, voice
Truesdell, Bernice	Washington School	Commercial, spelling
*Turner, Sadie	Perkins Institution	Third B grade
Uetz, A. Margaret	Wisconsin School	Arithmetic, intermediate
Utzman, Elsie	Arizona School	Algebra, geometry, nature study
*Van Deman, Esther	Kansas School	Violin
Van Natta, Mildred	New York Institute	Opportunity class, upper school
Van Zandt, Ona Fern	Texas School	Kindergarten assistant
Vaughan, Vivian	Washington School	Music, violin
Vaughn, Mary L.	North Carolina School	Sewing
*Voland, Herman L.	Wisconsin School	Weaving
*Von de Wall, Ida	Texas School	Domestic arts, assistant
Von Kunits, Paul	New York Institute	Radio
Voss, Wilhelmine C.	South Carolina School	Grades 6-7
*Wade, Margaret	Missouri School	Fifth grade
Walberg, Agnes	Ohio School	Weaving, caning (girls)
Walker, Laurens	Supt., South Carolina School	
Walker, Louisa	Prin., South Carolina School	
Walker, Pauline	Virginia School	Double-handicapped, special braille
*Wallace, Daisy	Kentucky School	Piano, reading, writing, arithmetic
*Walling, Lola	South Carolina School	High school
Walrond, Mary I.	W. Pennsylvania School	Music
Walton, Elsie, Mrs.	Colorado School	Grades 8-9
*Ward, Anne	Pennsylvania Institution	Special braille
Waring, William	New York Institute	General shop
Warmoth, L. C., Mrs.	Texas Institute, Colored	Grades 1-2
Waterhouse, Edward J.	Perkins Institution	Mathematics
*Waterhouse, Sina V., Mrs.	Perkins Institution	Speech correction
Watts, Maude, Mrs.	Texas School	Third grade

Name	*School*	*Subjects or Grades Taught*
WEAKLEY, ROBERT, MRS.	Tennessee School	Violin
*WEAR, HELEN	Illinois School	Fourth grade (boys)
WEATHERLOW, MARY L.	New York State School	Music
WEBER, HAZEL	Ohio School	Third grade
WEBSTER, MARTHA	Kentucky School, Colored	Grades 5-12, sewing
WEIDEMAN, DORIS	New York Institute	Typewriting
WEIGLE, MARY J.	Maryland School, Colored	Intermediate
*WEINER, ABRAHAM	Colorado School	Physical education
WELCH, MARY	Louisiana School	Clothing, manual arts (girls)
*WESTENSEE, EFFIE	Oregon School	Braille
WHINERY, S. M.	Prin., Indiana School	Geography 7, social science
WHIPP, C. E.	W. Virginia School	Violin, wind instruments
WHIPP, ETHEL	Ohio School	Typewriting, business training
WHITE, M. B., MRS.	Texas Institute, Colored	Handicrafts
WHITTIER, PHYLLIS	Utah School	Music
WIEGLE, HOWARD	W. Pennsylvania School	Boys' industrial
*WILBER, LOUISE, Ph. D.	Arizona School	Supervising teacher, English
WILKINSON, ROWENA	North Carolina School	Physical education
WILLIAMS, EMMIE F., MRS.	Alabama School	High first and second grades
WILLIAMS, ETHEL	North Carolina School	Irregular students
*WILLIAMS, FRANK	Indiana School	Broom making, chair caning
WILLIAMS, M. W.	Prin., N. Carolina School, Colored	
WILLIAMS, M. W., MRS.	North Carolina School, Colored	Grades 4-5
WILLIAMS, RUTH	North Dakota School	High school
*WILLIAMS, RUTH A.	Ohio School	Voice, piano, history, harmony
*WILSON, DAISY B.	Florida School	Piano, voice, organ, chorus
WOLFE, RUTH	New York Institute	Eurythmics
WOLOD, ETHEL	Wisconsin School	Second grade
WOMACK, M. L., MISS	Texas Institute, Colored	Typewriting
WOOD, ELINOR	Arizona School	Social science
WOODBURY, GLADYS	South Dakota School	Piano, voice
WOODMANSEE, JANE, MRS.	Washington School	Ungraded class
WOODROFFE, MINNIE C.	Colorado School	Instrumental and vocal music
WOODS, ARMEADA	Illinois School	Voice, boys' glee club
WOODWARD, RICE, MRS.	Alabama School	Grades 10-11
WOODWORTH, MARION A.	Perkins Institution	Social science
WOOLSTON, ROBERT W.	Supt., Illinois School	
WRIGHT, HAROLD W.	Asst. Prin., New York Institute	
WRIGHT, KATHERINE	Texas School	Violin
WRIGHT, JULIETTE	Texas School	High school history
WYMAN, LOUISE	Iowa School	Orchestra
YOUNG, FREDERICK J.	Wisconsin School	Economics, high school physiology
YOUNG, ROBERT C.	Kentucky School	Manual training
ZEDIKER, ALICE	Oklahoma School	Public school music
ZIEGEL, HELEN	New York Institute	Physical education, lower school
ZIMMERMAN, DORIS	New York Institute	Fifth grade

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TEACHERS IN DAY SCHOOL CLASSES FOR THE BLIND

Name	*School*	*Subjects or Grades Taught*
Bair, Mary R.	Minneapolis Public Schools	Sight saving, braille—grades 1-8
Bayliss, Mary	Minneapolis Public Schools	Sight saving, braille—grades 1-8
Bingham, Beulah Belle	Los Angeles Public Schools	Grades 1-2
Blend, Frances	Prin., Los Angeles Public Schools	
Burke, Sarah F.	New York Public Schools	Elementary grades
Chase, Maude	Detroit Public Schools	Intermediate
*Childs, J. J.	Atlanta Public Schools	Grades 1-9
Collins, Florence A.	New York Public Schools	Elementary grades
Comber, Frances M., Mrs.	New York Public Schools	Elementary grades
Cox, Effie	Cleveland Public Schools	Grades 4-6
Deffley, Ruth Irene	Newark Public Schools	Grammar grades
Deming, Mary Tate, Mrs.	Long Beach Public Schools	Grades 1-9
Di Pretoro, Dorothea	New York Public Schools	Elementary grades
Farley, Ruth L.	Los Angeles Public Schools	Grades 3-4
Ferguson, Agnes L.	Los Angeles Public Schools	Grades 6-7
Gavin, Isabel	Minneapolis Public Schools	Junior high school—sight saving, braille
Gruber, Kathern F.	Minneapolis Public Schools	Senior high school—sight saving, braille
Ellis, Samuel	New York Public Schools	High school
Halfacre, Dorothy F.	Los Angeles Public Schools	Grades 5-6
Harkness, Lina	Detroit Public Schools	Grades 3-6
Hurst, Estelle V., Mrs.	Los Angeles Public Schools	Grades 9-12
Hutchinson, Grace	Minneapolis Public Schools	Senior high school—sight saving, braille
Johnson, Lucille L.	Minneapolis Public Schools	Music, sight saving, braille
*Kloess, Alfred O.	Los Angeles Public Schools	Piano
Lawes, Estella	Supv., Cincinnati Public Schools	
Leeper, Grace Olive	Los Angeles Public Schools	Grades 7-8
*Leonard, Mary M.	Elizabeth Public Schools	Handwork—home teacher
Lesowitz, Meyer	New York Public Schools	High school
Levy, Carrie B.	Supv., Milwaukee Public Schools	Braille, sight saving
Lippa, Josephine	Cleveland Public Schools	Grades 1-2
Lombard, Harriet	Detroit Public Schools	Grades 2-6
Lundberg, Clara	Minneapolis Public Schools	Grades 1-6—sight saving, braille
McConnell, Anna Bain	New Orleans Public Schools	All subjects
Mahlenbrock, Anna	Jersey City Public Schools	Elementary grades
Mayer, Louisa E.	New York Public Schools	High school
Meagher, Margaret I.	New York Public Schools	Elementary grades
Moscrip, Frances E.	Inspector of Classes for the Blind, New York Public Schools	
Nystrom, Ingeborg	Minneapolis Public Schools	Grades 1-6—sight saving, braille
Odell, Edna, Mrs.	Minneapolis Public Schools	Grades 1-6—sight saving, braille
Olds, Lewis	St. Cloud Public Schools	Advanced grades

Name	*School*	*Subjects or Grades Taught*
OLDS, MARGARET	Grand Rapids Public Schools	Assistant
OLSON, MILDRED	Minneapolis Public Schools	Music, sight saving, braille, assistant
OWEN, GLADYS	Detroit Public Schools	High school
PATERSON, JANET G.	Supv., Newark Public Schools	
PECK, OLIVE S.	Supv., Braille and Sight Saving Classes, Cleveland Public Schools	
POWERS, PAULINE	Youngstown Public Schools	Grades 2, 3, 6-12
QUIETTE, WILLIAM E.	Los Angeles Public Schools	Grades 9-12
QUINN, MABEL	Cleveland Public Schools	Grades 7-9
ROBERTS, MABEL G.	New York Public Schools	Elementary grades
ROBERTS, MARIAN R.	Detroit Public Schools	Kindergarten, grades 1-2
ROGERS, C. U., MRS.	Atlanta Public Schools	Handwork
RORABECK, LOUISA	Grand Rapids Public Schools	Kindergarten, high school
SCHOWALTER, FREDA	St. Cloud Public Schools	Advanced grades
SCHUMACHER, DOROTHY	Minneapolis Public Schools	Grades 1-6—sight saving, braille
SCRITCHFIELD, CHARLES	Detroit Public Schools	Grades 3-6
SMITH, GEORGE E.	Supv., Buffalo Public Schools	
SMITH, LORINDA, MRS.	Detroit Public Schools	Handwork
SOARES, MARGARET M.	Supv., Detroit Public Schools	
*SPRENGEL, MARIE	Detroit Public Schools	Music—all classes
STURSBERG, ALMA B.	Elizabeth Public Schools	Grades 1-6
TAYLOR, CLARA	Newark Public Schools	Primary
TAYLOR, KATHERINE	Supv., Paterson Public Schools	
VINTON, EARL H.	Minneapolis Public Schools	Manual training, sight saving, braille
WHITE, RUTHA MYRTLE	Los Angeles Public Schools	Grades 9-12

Because of the fact that the present depression has made it impossible for the Arthur Sunshine Home and Nursery School for the Blind to convert its assets into cash for immediate use, the organization is having to close its residential unit temporarily. However, the research work and a limited amount of extension work will be continued. The offices will be at the present address—80 Pine Grove Avenue, Summit, New Jersey. Although the closing of the residential unit distinctly hampers the research work, it does not mean that that work will have to be discontinued. The nursery school at the New York Lighthouse for the Blind is cooperating with the Arthur Home in its research program as is the Kindergarten Department at Overbrook.

OUR CONTRIBUTORS

Dr. Samuel P. Hayes is Professor of Psychology at Mt. Holyoke College, South Hadley, Massachusetts.

Miss Thelma E. Peirce is Head of the Physiotherapy Department at Perkins Institution.

Miss Jessica L. Langworthy was formerly on the staff of Perkins Institution. As we go to press, we learn with deep regret of her death in Florida.

The Teachers Forum

FOR

INSTRUCTORS OF BLIND CHILDREN

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WORDS ARE WISE MEN'S COUNTERS (Hobbes): HOW RICH ARE THE BLIND?

SAMUEL P. HAYES, Ph.D.

Children often use words whose meaning they do not understand. They may be simply imitating the speech of adults as they imitate gestures and facial expressions. They may be experimenting with words, as they do with actions, to see what effect they will have upon their companions, parents or teachers. A story is told of a small boy who treasured a very naughty word which he used only when angry, and even then he whispered it, fearing its great potency. His word was "perspiration!" Children may also use adult words to bolster up the ego, to assure themselves that they are advancing up the perilous climb to adulthood, to prove that they are growing up.

Insecurity, or some uncomfortable sense of limitation or possible inferiority, probably motivates much of the verbal showing off of high school boys and girls, the "fine writing" and bombastic oratory which cause so much anxiety to teachers of English. Much political speech-making appears to be intended to impress rather than to instruct the listeners and the strange polysyllabic constructions attributed to negroes and to white hoboes in the funny papers go still farther back into the narcism of childhood. Ritchie (9)* thinks that the blind are particularly prone to make errors of this sort and that they are used as an unconscious defense mechanism. "Many blind people," he writes, (p. 193) "have a fondness for big words. In writing they effect the grand, the Johnsonian, manner. The modern cult of the conversational in style leaves them cold. They roll the word of many syllables lovingly round the tongue and quickly respond to like eloquence in others. That such a trait is allowed to persist after school days is a reflection on the current teaching of English, for the misuse of words is, in most, an eradicable failing; but the real point at issue is that, to a degree distinctly greater than is true in the case of their seeing comrades, blind adolescents and adults have a tendency towards this weakness." Of course, the mechanism of defending oneself from the unpleasant, perhaps unbearable, recognition of inferiority is very common in all phases of social life. Morgan (8), in his *Psychology of Abnormal People,* suggests that whenever a person manifests any trait to an extreme degree, there is the possibility of compensation for the opposite trait. "If a person is extremely arrogant," he writes (p. 543), "consider a compensation for a feeling of insufficiency. If a person is extremely unselfish, consider a compensation for undesirable selfishness." Of this he gives an interesting example on page 518. "If a person is too angelic in his conduct, suspect an attempt to submerge a tendency to be bad. If he is extremely bad, if he shows that he is trying to be bad, look for a reaction against a fear of being a 'goody-goody.' While such assumptions may not always be correct, they furnish working hypotheses. It is surprising how often they turn out to be correct." Ritchie continues in the same vein and applies this explanation to the actions of the blind. "The undersized man not infrequently carries himself with more than ordinary self-assurance," he writes (p. 194), "and is of an unalterable conviction that it is quality and not quantity that counts. Can the verbal exuberance of the blind be fitted into such a category? Can we not trace in this mental phase a revolt against the galling conviction of his inferiority? His subconscious mind sets about redressing the balance. If he is handicapped in regard to vision, there are other regions of activity in which no disability exists. The use of words is one of these, and he strives by an exaggeration of literary language to

*Numbers after names refer to books and articles listed at the end.

show his superiority to the average man. For the same reason he makes much of the mistakes that seeing people commit: 'Just the silly sort of thing a sighted man would do!' he says, and smiles complacently at the immunity of himself and his friends from such blunders." This is called the "derogatory technique" by the psychologist and is related to the tendency to attempt to reform others in traits which we fear and are struggling within ourselves.

Still another difficulty in the development of facility in the use of words is brought to our attention by Cutsforth's (1) discussion of verbalism and the unreality of words to the blind. As a result of our educational methods, children born blind, and to a still greater degree the deaf-blind, acquire a vocabulary which corresponds very slightly to their own sensory experience—a vocabulary of the seeing, a superstructure of words and concepts forced upon them to meet the conventional standards of the world about them. Moreover, he feels that they are discouraged in the use of words from their own experience, and that even when object lessons are given, the emphasis is generally upon elements which are important for the seeing rather than upon what is reality to the blind. "A teacher," he writes (p. 57), "feels that if she shows a child a porcelain model of a frog, she has given reality to his concept of a frog, its size, shape and position. Temperature, slipperiness, movement, all the tactually characteristic frog attributes, as well as its sound, are omitted. Tactually the porcelain frog is scarcely froglike at all. It may look like a frog, but it surely does not feel like one."

This article is an attempt to show how efficient blind children are in the *understanding* of words; a later article will consider how well they *use* words. Two main lines of evidence will be presented: (1) The results of the Terman Vocabulary Test given to classes by the group method and to individuals in the course of the Binet testing; and (2) the results of the Word Meaning Test in the Stanford Achievement Test series. Full details are given for the use of these tests in the grades, with methods of scoring and suggestions for interpretation of results. The writer of this article will welcome reports of the use of these tests, and on request he will be glad to assist in clarifying obscure points.

Terman's English Vocabulary Test (2)

OBJECT: The purpose of this test is to determine the extent of the pupils' reading vocabulary, to determine about how many words the pupils can understand when read or heard. This test also correlates high with tests of general intelligence.

MATERIAL: The first 50 words in Terman's (10) Vocabulary Test.

METHOD: Pass around blank sheets of paper and have the pupils write name, age, grade and the date at the top. Then say:

"I want to find out how many words you know. I shall read you a list of words, one at a time. After I have pronounced a word, I want you to consider whether you could DEFINE it as exactly as words are ordinarily defined in a dictionary. If you could define it, write the number of the word and a capital D for define, on your papers. If you could not define it but could EXPLAIN it well enough to give some idea of its meaning to one who is not familiar with it, write the number of the word and a capital E for explain. If the word is only roughly FAMILIAR and not a word that you could explain, write the number of the word and a capital F for familiar. If the word is entirely NEW and unknown, write the number of the word and a capital N for new. For instance, take the word 'budget.' The dictionary *defines* this word by explaining that originally it meant a small bag, but is now generally used figuratively as 'a budget of news.' In England it is used as a name for the annual financial statement of the government, with an estimate of probable income, expenses, etc. One might *explain* the word in a few words, as an estimate of one's income and expenses. It might be vaguely

familiar to one because he had heard his parents make some reference to the family budget, without any clear idea of its meaning. If one had never heard the word, and had no idea what it could mean, he should report it as *new*. To repeat, after I have pronounced a word you are to write its number and one of the following letters: D for define, E for explain, F for familiar, or N for new.

"Write across your line, putting 5 replies on each line. When 5 words have been given I shall reread the list of 5 and ask you to select one word to define. You will then be given plenty of time to write your definition of the word you select. There are 50 words in all.

"Does everyone understand?"

After answering questions give the words in order, allowing plenty of time for the consideration of each word. Spell any words which you think might not be understood from the sound, or about which the children ask questions. Watch the pupils to see that they do not write the whole word each time. Give the test in the following form:

"The first word is 'gown.' Write number 1 and one of the letters, D for define, E for explain, F for familiar, or N for new. Do not write the whole word, just its number and a letter.

"The second word is 'tap.' Write number 2 and one of the letters, D, E, F or N. The word is spelled t-a-p," etc.

When 5 words have been given, say:

"I will now reread the 5 words I have just given. Please pick out one and write me a definition of it."

Then read the 5 words slowly and allow time for all to finish their definition, unless you think some are loitering. Say:

"Ready now for the 6th word," and continue to the end, stopping after each 5 words for the pupils to write definitions.

SCORING: The scoring is somewhat complicated because we cannot be sure that the pupils know all the words they claim to know, and in various cases we have found pupils writing D's and E's for words they could not explain sensibly. The steps in scoring are as follows:

Determine the *rough score* by counting up the D's, E's and F's, allowing one point for each D or E, and ½ point for each F.

Since we cannot be sure that the pupils have not over-estimated their knowledge, we then study over their definitions of words they claimed to be able to explain, and grade each definition on a scale of 100. By adding these grades together and dividing by the number, we get an *average value* for the definitions.

Upon the assumption that the pupil would perhaps have done just as well if he had attempted to define other words for which he reported a D or an E, we multiply the rough score by the average value of the definitions and thus get an *accredited* score, which probably represents his real knowledge fairly well.

Dividing the accredited score by 50, the whole number of words in the list, gives us a *per cent of correctness* on the test.

Multiplying this per cent of correctness by 18,000, the total number of words in the dictionary from which our list was taken haphazardly, gives us the *probable vocabulary* of the child tested.

Our formula then is:

Rough score X average value of definitions = accredited score

Accredited score ÷ 50 = per cent of correctness

Per cent of correctness x 18,000 = probable vocabulary

Illustration:

Pupil A writes D or E after 20 words — value 20

Pupil A writes F after 10 words — 5

Rough score — 25

Pupil A writes 6 definitions with an average value of 80%

25 X 80% = 20, our *accredited score*

20 ÷ 50 = .40 40% of 18,000 = 7,200, the probable vocabulary .

Terman's List of 50 Words

gown	pork	juggler	tolerate	retroactive
tap	outward	regard	artless	ambergris
scorch	southern	stave	depredation	achromatic
puddle	lecture	brunette	lotus	perfunctory
envelope	dungeon	hysterics	frustrate	casuistry
rule	skill	Mars	harpy	piscatorial
health	ramble	mosaic	flaunt	sudorific
eyelash	civil	bewail	ochre	parterre
copper	insure	priceless	milksop	shagreen
curse	nerve	disproportionate	incrustation	complot

TABLE I

Results obtained in eight schools for the blind with Terman's English Group Vocabulary Test

Ages	Number of pupils tested	Median scores	Standards for the blind	Standards for the seeing
10	....	.....	.....	4680
11	26	5750	5250	5400
12	36	4250	5417	6480
13	30	6250	5750	7560
14	47	5750	6083	9000
15	57	6250	6417	.....
16	58	7250	7417	11700 (average adult)
17	63	8750	8417	.....
18	47	9250	9250	13500 (superior adult)
19	32	9750	10250	.....
20	19	11750	11250	.....
21	15	12250	11907	.....
22	7	11750	10917	.....
23 and up	6	8750	9750	.....
Total	443			

INTERPRETATION: Table I seems to indicate a definite, annually increasing deficiency in vocabulary for the blind, though the small number of cases makes the curve irregular. Smoothing the curve of median scores to obtain tentative standards for the blind, we find the 11-year seeing standard reached by the blind at 12 years, the 12-year seeing standard reached by the blind at 15 years, the 13-year seeing standard nearly reached by the blind at 16 years, the 14-year seeing standard reached by the blind at 18 years, the 16-year, or average adult, seeing standard reached by the blind at 20 years, and somewhat exceeded at 21, after which there is a rapid decrease in scores which may easily be accounted for by the graduation of the brighter pupils before this age. The seeing standard for 18 years (superior adult) is far above the highest median score for any year group of the blind, though a few bright pupils from 16 years on made scores indicating a vocabulary of more than 13500 words. It is not surprising to find blind children testing below the seeing in vocabulary. The slowness and laboriousness of their reading puts a natural limit upon their chances of meeting new words in literature, and their restricted life experience in residential schools cuts them off from many currents of practical life. When these same words are used in the Hayes-Binet tests given individually with the request for an oral definition of each word, we find

the same decided inferiority to the seeing, so we feel sure that there is nothing in the method of giving this as a *group* test which puts the blind to an unfair disadvantage. Table II gives the results of the *individual* Binet testing with very large numbers of students. It will be observed that even when two years' retardation was allowed by setting the standards for the blind two years later than for the seeing, the blind fell progressively further behind the seeing from 14 years onward, the 14-year seeing standard of 50 words not being attained by the blind until 20 years, and the 16-year seeing standard not attained at all, by any age group.

Teachers will be interested in Terman's (10) discussion of this test, when given individually in a Binet examination. Writing in 1916, when his revision of the Binet tests was first published, he said (p. 230), "The vocabulary test has a far higher value than any other single test of the scale" (which then consisted of 68 regular tests and 16 alternates). "Used with children of English-speaking parents (with children whose home language is not English it is of course unreliable), it probably has higher value than any other three tests in the scale. Our statistics show that in a large majority of cases the vocabulary test alone will give us an

TABLE II

Results of the Terman Vocabulary Test given individually with oral responses in the Hayes-Binet testing (3)

Attainments of the blind in % passing						Terman's standards for the seeing		
1600 tested before 1930			2233 tested 1930-36					
Age	Number of words	Per cent knowing	Age	Number tested	Per cent knowing	Age	Number of words	Per cent knowing
			8	98	39	8	20	60-65
			9	133	41			
10	20	36	10	166	59	10	30	60-65
			11	182	74			
			12	166	77			
			10	156	32			
			11	185	39	12	40	60-65
12	30	41	12	187	50			
			13	169	66			
			14	152	72			
			12	154	27			
			13	149	35	14	50	60-65
14	40	46	14	164	50			
			15	140	59			
			16	165	59			
			17	122	70			
			14	151	23			
			15	126	34	16	65	60-65
16	50	32	16	160	34			
			17	127	50			
			18	120	47			
			19	103	56			
			20	56	66			
			16	143	15			
			17	116	20	18	75	60-65
18	60	35	18	116	32			
			19	100	23			
			20	57	40			
			21	57	39			
			21+	63	43			

intelligence quotient within ten per cent of that secured by the entire scale. Out of hundreds of English-speaking children we have not found one testing significantly above age who has a significantly low vocabulary; and correspondingly, those who test much below age never have a high vocabulary.

"Occasionally, however, a subject tests somewhat higher or lower in vocabulary than the mental age would lead us to expect. This is often the case with dull children in cultured homes and with intelligent children whose home environment has not stimulated language development. But even in these cases we are not seriously misled, for the dull child of fortunate home surroundings shows his dullness in the quality of his definitions if not in their quantity; while the bright child of illiterate parents shows his intelligence in the aptness and accuracy of his definitions."

In the 1937 revision of the Binet tests, Terman (11) reduced his list from 100 to 45 words, carefully arranged them in order from easy to difficult and extended their use down to the sixth year. Again he says that this is the most valuable single test in the scale. "Its interest value is high," he writes (p. 302). "It presents a familiar task to the subject, and the fact that it begins with words in common use and increases rapidly in difficulty gives the examiner a rapid survey method of estimating the subject's ability. It agrees to a higher degree with the mental age rating on the scale as a whole; correlations for single age groups range from .65 to .91 with an average of .81."

For re-testing, Terman's second list of 50 words may be used, and scores compared to indicate progress. There is now a considerable variety of vocabulary tests available for all the grades, high school and college. Hildreth (7) (p. 63) lists 42 articles on vocabulary tests and names of tests, including the test developed by M. Smith in her "Investigation of the Development of the Sentence and Extent of Vocabulary in Young Children" (Iowa Studies in Child Welfare 1926, 3, No. 5), the Hill Test of Word Meanings for Primary Grades (Bloomington, Illinois: Public School Pub. Co., 1930), the Los Angeles Sentence Vocabulary Test, for grades 3-9 (Los Angeles: South. Calif. School Book Depository, 1926), O'Rourke's Survey Test of Vocabulary, for grades 3-13 (New York: Psychological Corp., 1931), and O'Connor's Work Sample No. 95—Vocabulary for college students (Boston: Ginn and Co.). Any of these may be adapted for use with the blind in much the same way as the Terman test discussed above, or the Stanford Achievement Test described below.

The New Stanford Achievement Test, No. 2, Word Meaning

OBJECT: The purpose of this test is to measure the pupils' knowledge of words likely to be met with in general reading. The multiple-choice-completion method of testing is used. Two types of items have been included: those in which the critical word is harder than the response word, and those in which it is easier. Care was taken to see that a reasonable sampling of the parts of speech would be represented and the response word and the critical word for a given item are nearly always of the same part of speech.

MATERIAL: From the American Printing House, order one ink print copy of each of the following: the directions for administering, the key and directions for scoring, and an advanced examination pamphlet for grades 4-9 in one of the five forms, V, W, X, Y or Z; and secure enough braille pamphlets of the *same form* to provide one copy for each pupil. Each form of the test consists of 80 incomplete sentences, the first part of each sentence being followed by five words, one of which will satisfactorily complete the sentence, as follows:

1. Cheese is

bread drink food gold time

2. A baker makes
   dresses hats shoes bread suits
3. An oak is a kind of
   box corn egg money tree
4. A dove is a
   bird boat fish horse sheep
5. A chimney is for
   bees games smoke snow soil

The sentences are listed in order of difficulty, the easiest appearing at the beginning and the most difficult at the end of the test. These sample sentences are taken from Form Y. Since there are five equally difficult forms of the test, it is possible to test pupils at the beginning and the middle or end of the year, and in succeeding years, to show progress, without the danger that memory of a former test might invalidate the results of a later one. Norms are established for years and months of age, and for grades and tenths of a grade, so it is possible to check results against standards in any month in the school year. Used test sheets also are very good review material.

METHOD: Say: "Today we are to have a test to show how much you have learned. Please do not look into the test pamphlet until I tell you to do so. Keep your hands folded till I give you the signal to start work. For this test you will not need a slate, but will draw lines through certain words on the test pages with a pencil which I will give you." Pass pamphlets and pencils and then say: "In this test you will find a series of incomplete sentences, each one of which needs one word to make it true, and following each sentence you will find a list of five words from which you are to select the correct one. When you have decided which of these five words will best finish a sentence, you are to draw a line through that word with your pencil. Before beginning the test we will try a couple of sentences to show you just what you are to do.

"Open your pamphlets to the page that starts with the sample sentence: 'A rose is a..... box *flower* home month river.' Of course, a rose is a flower, so take your pencils and draw a line through the word *flower*. Look at the next sentence. 'A roof is found on a..... book person rock *house* word.' Of course, a roof is found on a house, so that is the correct word; draw a line through the word *house*.

"Now we are ready to begin the test. Do not start till I say GO, and the very second I say STOP, you must stop and fold your hands. After we have begun, you must not ask any questions. If you drop your pencil, or lose your place, raise your hand and I will help you. If you come to some sentence you cannot do, skip it and go on to the next. Do your very best and do not pay any attention to what anyone else is doing. Remember that in this test you are to draw a line with your pencil through the word that makes a sentence true, just as in the samples we have worked over together. When you have finished with the first page go right on to the next. Do as many sentences as you can in the time given you. Are there any questions? . . . Ready, GO." Record the exact time of starting.

At the end of 25 minutes say: "All STOP for a minute, as I want to mark your pamphlets to show how far you have gone. Please sit with your hands folded." Go around with a *red* pencil and encircle the last word crossed out. This will give you two scores, one at 25 minutes and one at 35 minutes, for later study. Say: "Now all find the last sentence you worked on and then wait for the signal to go ahead." See that all are in the right place and then say: "Ready, GO." At the end of another 10 minutes say: "All STOP and fold your hands." Then collect the pamphlets, making sure that each child's name is on the outside.

SCORING: Use the printed key to correct the pupils' work and on their pamphlets, under their names, record the scores at 25 and at 35 minutes, omitting the first two sentences used as examples. The seeing are allowed only ten minutes for this test, but in order to make sure that all the tests in the Stanford Achievement series shall measure

"power" rather than speed, it has seemed best to give the blind about three times as long as the seeing. It is hoped that a considerable number of schools will report their scores at 25 and 35 minutes, with a table showing how many and which test items each pupil attempted and passed, and other comments, in order that optimal time limits may be determined. For the present it is recommended that teachers use for their own calculations the results at 35 minutes, as this will meet the criticism on the question of speed and allow a larger number of pupils to be tested on the more difficult items at the end of the test. The raw score obtained from the use of the key should next be transmuted into equated scores by means of the tables at the bottom of the ink print test pamphlet of the same form as that used in braille, and these equated scores used in the further calculations.

INTERPRETATION: As we have rather complete norms for this test, teachers will be interested in making a number of scatter diagrams (see the writer's article (4) in *The Teachers Forum* for May, 1935), by chronological age, by mental age and by grade, and perhaps also by I. Q., by classroom work in reading, by age at loss of vision, by number of years in school, and by reading rate as determined by some objective test. We have not found scatter diagrams and curves by chronological age very satisfactory and generally form them by mental age for our study and by grades for the benefit of teachers. Tables III and IV give the results obtained with this test in two schools for the blind in two succeeding school years. These tables may appear complicated but they are simple enough when the method of forming them is understood. Table III should be read as follows: In grade 9, 22 pupils were tested in November '35 and obtained an average score of 100 points. As the norm for the seeing for this grade in November is 97, these children tested above the seeing, their efficiency being indicated by 103% of the norm, a figure obtained by dividing the average score by the norm. School B was tested in February when the norms would naturally be somewhat higher. So we find the 8 pupils in grade 9, whose average score was 88 points, rising only to 89% of the norm. When the

Table III

Results, in two schools for the blind, of the Stanford Achievement Test, No. 2, Word Meaning, arranged by grades

	School A, tested in Nov. '35				School B, tested in Feb. '36				Two schools combined			
Grade	Number tested	Av. score	Norms for Nov.	Per cent of norm	Number tested	Av. score	Norms for Feb.	Per cent of norm	Number tested	Av. score	Norms for Dec.	Per cent of norm
9	22	100	97	103	8	88	99	89	30	97	98	99
8	18	94	91	104	18	94	93	101	36	94	91	104
7	15	88	84	105	17	86	86	100	32	87	85	102
6	17	78	76	103	12	81	78	103	29	79	77	103
5	13	62	65	96	11	65	68	94	24	63	66	95
4	17	48	52	92	12	61	57	105	29	53	53	100

Table IV

Results, in two schools for the blind, of the Stanford Achievement Test, No. 2, Word Meaning, arranged by grades, second year of testing

	School A, tested in Dec. '36				School B, tested in Oct. '36				Two schools combined			
Grade	Number tested	Av. score	Norms for Dec.	Per cent of norm	Number tested	Av. score	Norms for Oct.	Per cent of norm	Number tested	Av. score	Norms for Nov.	Per cent of norm
9	15	98	98	100	11	101	96	105	26	99	97	102
8	15	97	91	107	18	95	90	106	33	96	91	105
7	19	85	84	101	15	87	83	105	34	86	84	102
6	8	76	77	99	8	77	75	103	16	77	76	101
5	18	55	66	83	13	66	64	103	31	60	65	92
4	9	47	53	88	10	45	50	89	19	46	52	88

two schools are combined and December norms used, considering December as intermediate between November and February, we find the 30 pupils in grade 9 testing at 99% of the norm. As one studies the table, giving particular attention to the columns headed "per cent of norm," it appears that both schools test pretty close to the seeing standards by grades, four of the six per cents of norm being above 100 in each column. Much the same situation obtains in Table IV, though there is a slight change in the relative success of the two schools. In the first testing reported in Table III, School A was slightly superior to School B; in the second testing reported in Table IV, School B is somewhat superior to School A. In both schools, the teachers are justified in concluding that their pupils are doing about as well in this test as one would expect of them.

Having determined whether or not their grades are testing up to standard, teachers will also wish to study the individual scores, considering whether their pupils with high scores are the ones they would expect this of, trying to account for low scores made by good pupils, noting changes from high to low, or vice versa, from the first to the second year of testing. Some teachers may be interested to work out correlations for their grades by the simple method outlined in the writer's (5) article in *The Teachers Forum* for May, 1937, pages 89 ff., and illustrated in his (6) article on geography in the issue for November, 1937.

Table V gives the results obtained in these two schools in 1935-6, arranged by mental age. This method of tabulation is particularly suitable for this test as it is really a simple vocabulary test and so would be expected to show a high correlation with intelligence. Examination of the columns headed "per cent of norm" in Table V gives one quite a different impression of the facility of blind children in dealing with word meanings from the conclusion drawn from Table IV. Here we find few groups testing at 100, the per cents for School A ranging from 103 down to 80 with a median at 90, while the per cents for School B ranged from 142 down to 67 with a median at 84. When the two schools are combined, and single scores have less effect on the average scores, we find a median at 90, or approximately 10% below the standards for the seeing. Translated into age comparisons, we may say that at 9 and 10 M.A. the blind do decidedly better than the seeing; from 12 to 15 M.A. they show a retardation of about one year; and from 16 M.A. on they are retarded two or three years. A similar situation was discovered when these schools were retested the following year with another form of the test. These results remind us of the progressive retardation discovered with the

Table V

Results, in two schools for the blind, of the Stanford Achievement Test, No. 2, Word Meaning, arranged by mental age

	School A, tested in Nov. '35				School B, tested in Feb. '36				Two schools combined			
Grade	Number tested	Av. score	Norms for Nov.	Per cent of norm	Number tested	Av. score	Norms for Feb.	Per cent of norm	Number tested	Av. score	Norms for Dec.	Per cent of norm
19	3	106	119	89	4	98	121	81	7	101	120	84
18	6	101	116	88	8	89	117	76	14	94	116	81
17	13	96	111	86	8	90	113	80	21	94	112	84
16	12	94	104	90	15	84	106	79	27	88	105	84
15	16	91	97	94	7	83	99	84	23	89	97	91
14	10	83	92	90	9	83	93	89	19	83	92	90
13	10	78	86	91	5	88	87	101	15	81	86	94
12	9	77	77	100	6	71	79	90	15	75	78	96
11	11	53	66	80	4	46	69	67	15	51	67	76
10	9	52	53	98	5	62	56	111	14	56	54	104
9	4	40	39	103	4	61	43	142	8	50	40	125

Terman vocabulary tests, and are doubtless to be explained in the same way. The blind are enormously handicapped in their acquisition of language in comparison with seeing children who are constantly enlarging their vocabularies through wider and wider reading, either in books or in newspapers, and being about two grades ahead of the blind in all the grades, they naturally have richer textbook material, while their greater freedom of action brings them more varied life experiences and their inevitable linguistic accompaniments. Some day it will be interesting to determine whether the wide use of the Talking Book has resulted in lifting the vocabularies of the blind nearer to those of the seeing, somewhat as the radio has brought to the masses a wealth of musical information which a generation ago was possessed only by a few who had enjoyed a special musical education.

SUMMARY: We have raised the questions whether compensation for a sense of inferiority due to blindness might predispose blind children to a conspicuous use of large words, and whether our educational methods tend to distort their vocabulary by over-emphasis on words based upon vision to the neglect of words which are closer to their actual experience with the world of objects. We have presented evidence of the degree of their competence in dealing with standard vocabularies, and given detailed instructions for the use of two important group tests planned to measure appreciation of the meanings of words. So far as our results go, they indicate, among the blind in thirteen residential schools, an inferiority in the understanding of words about equal to their educational retardation in the early grades, with a progressively greater inferiority in later adolescence where longer words and specialized, abstract terms form a larger proportion of standard vocabularies. As the same trend is evident in all of the schools tested, we cannot look to local differences in methods of teaching for an explanation. A careful inspection of the particular vocabularies used does not discover a preponderance of purely visual terms which would make the tests unfair to the blind or lower their scores on the assumption of excessive verbalism. Our curves of results take the normal bell-shaped form with small numbers of very inferior and very superior pupils at the extreme ends of the curves. It is quite possible that some of those who show great superiority may have specialized in "big words" as a form of compensation, but one must be cautious about an unlimited use of this idea. It seems safer to assume that in this matter we are dealing with the "fallacy of the single case": conspicuous individuals with good native intelligence may be making the most of their linguistic abilities and by attracting attention to themselves may give us the impression that such a reaction is a common response to blindness. Our results from the testing of large numbers of unselected blind pupils, however, seem to show that the average blind child could not make much of a display with difficult words because he does not know them when they appear in the tests. If he uses polysyllabic words, except as trial balloons, his search for security will receive shocks and set-backs which will be most disconcerting. Teachers may greatly assist blind children in developing from the childish to the adult use of vocabulary. Aside from the careful explanation of all new words as they occur in textbooks and classroom discussion, and an alert attitude toward new concepts in the newspapers and on the radio, it might be worth while to make a consistent direct attack upon the problem. According to Terman's standards, children's vocabularies should increase from the 12th to the 18th year at the rate of more than 1000 words per year, if the children are bright enough to absorb the material that comes their way in the process of education. Might it not be possible to assure the regular acquisition of a considerable number of new words every school year by an extension of the spelling course into the upper

(*Continued on Page* 108

DOCTOR ALLEN SAYS:

"Self help and self reliance are twin brothers in the development of character." "Self help is not the cheese paring policy of cutting down expenses; it is rather a brave policy of pushing up competence."—(F. H. Sill, Kent School.)

"So, Mr. Salesman, you think you can sell me dish washing machines; one for each of our dozen cottages, do you? No, I wouldn't accept them as gifts. Time and labor saving devices of that sort tend to defeat one of the advantages of our small group living, which is to afford the pupils ways of contributing to the running of the houses. Our children come from humble homes where every member helps. The blind one must not be left out; indeed, he is happier in feeling himself useful. Here at school we do need servants—but the fewest possible. For them time saving machinery is desirable; but ours is a school, not so much for training in and through the three R's, as in doing, making, and in self help. Book learning is education of a sort, of course; but what we call schooling in the realities of life, is good for all youth, and particularly for the underprivileged. Should we do everything for them we should be adding to their dependence. To teach them independence in little things is the greatest kindness we can do them. Obviously blindness is hard to bear, and in so far forth is disciplinary. But enforced idleness makes it a curse.

"Sir, all this is a new idea to me. What do you have them do about the house?"

"We built and furnished their cottages so that the children could do much of the daily housework—narrow halls and stairways, small bedrooms, many-paned windows, snug dish washing pantries (copied from a self help school for paying pupils), food slides between kitchen and dining room, tables for not exceeding eight, each with a teacher to serve it while one of the partly seeing members in turn waits on table, afterwards clears it and lays it again for the next meal. When the family cook takes her afternoon out she leaves the supper in such shape that the pupils may easily do what more is to be done.

"So much for the cottages. In the schoolhouse, the classrooms being small, each can be kept in order under direction of its teacher. Every pupil before leaving the manual training shop, clears his bench of shavings and puts back his tools where they belong, so forming a habit which is not without ethical significance. While hired men may be opening up snow paths for the girls, the boys shovel their own. At South Boston, the big boys might be taken directly from class to clear snow from our street pavement, thus demonstrating their capacity to our neighbors.

"Yes, where there's a will there's a way, and in proportion as we are educators with vision for our pupils' future will we provide both.

"These are the tasks the older ones do; yet, even the children at the lower school soon learn to do their part in their self help family; for according to Angelo Patri: 'A family is a partnership or it is not a family.' "

Now, my readers; I once asked a superintendent who was showing me about his new plant: "What daily chores do the children do?" and I was much taken aback by his reply: 'House chores? Our pupils do not do any! Our state provides education free for all its children and hires help to attend to the daily up-keep. Why should we ask the blind inmates to do more than others do? No, our state (naming it proudly) doesn't expect them to do housework.' "

All instructors of the blind should endeavor to obtain a copy of *Lifting the Veil,* the Centennial Pageant of the Ohio State School for the Blind. Please address requests or inquiries to Mr. W. G. Scarberry. This was prepared by the Federal Writers' Project, Works Progress Administration and reproduced in cooperation with the School.

THE HEALTH PROGRAM OF THE IOWA SCHOOL FOR THE BLIND

F. E. Palmer

In many respects the Iowa School for the Blind has a most satisfactory set-up for the care of the health and physical welfare of its students, although this statement is not to be taken as implying that this is superior to that of other schools. I am writing of it only because I have been invited by the editor of the *Forum* to furnish a brief outline of the facts concerning our set-up. They are as follows:

1. A well-equipped hospital having an eighteen-bed capacity.
2. A registered trained nurse, who is in constant attendance at the school, administering treatments for eye or other physical ailments, caring for ill students or attending to other hospital duties.
3. A regularly employed physician, who makes daily calls at the school to examine students who are sick or indisposed, to perform the usual medical services, to give advice with reference to the need of a specialist's services, to recommend helpful treatments, or to vaccinate for the prevention of disease.
4. A regularly employed dentist, who gives two forenoons each week to the task of caring for the teeth of the students; looking after the students' dental needs fully.
5. The complete service of the University Medical School and Hospital.
   a. Children entering the school for the first time are taken to the University Hospital for a complete examination and check-up.
   b. All cases needing surgical treatment are referred to the University Hospital for attention.
   c. Refractions for the purpose of fitting glasses are all taken care of at the University Hospital.
   d. Cases of serious illness, needing the skill of a specialist, are cared for at the University Hospital. All of this service is without cost to the School for the Blind and is, indeed, very valuable.
6. Two or three times during each school year the ophthalmologist of the State University Medical School and Hospital, accompanied by two or three internes, makes a visit to the school. At the time of this visit all of the students of the school assemble for eye and other examinations. From the findings of these examinations the ophthalmologist makes recommendations as follows:
   a. Concerning those needing daily or frequent medical or other treatment.
   b. Concerning those who might be benefited by surgical means.
   c. Concerning those whose vision might be improved by the fitting of glasses.

If the recommendation of the ophthalmologist involves surgery, then it is transmitted to the parents. If they give their consent, the ones concerned are sent to the University Hospital for such surgical work. During the year 1936-37 there were sent as follows:

a. To the eye department, 48
b. To the department of otology, 14
c. To the department of surgery, 9
d. To the orthopedic department, 2
e. To the department of neurology, 1
f. To the department of dermatology, 1
g. To the department of medicine, 1

The services of the Eye Department of the University may be used to illustrate the services of the University Hospital in general. During the year 1936-37 I find the following as a part of such services:

Eye examinations, 48
Enucleations, 4

Refractions and fitting glasses, 24
Iridectomy, 3

In the department of otology there were six cases of tonsillectomy and in the surgical department three cases of appendectomy.

Besides the services of the University Hospital, the school hospital has rendered conspicuous service, as is evident by the following record:

School Year 1936-37

Average number of bed cases per day, 4.4
Largest number of patients, 17
Hospital days, 1210
Hospital cases, 152
Contagious cases
Mumps, 10
Whooping cough, 10
Pneumonia, 4
Fractures, 6
Deaths, 3
Tonsilitis and respiratory infections, 80
Infections not specified, and minor injuries, 40
Brain tumors, 2
Epilepsy, 4
Antiluetic-treatments regularly given, 3
Urinalyses, 268
Small pox vaccinations, 52
Schick tests, 29
Dick tests, 27
Pertussis antigen given 42 students
Wassermanns, 33

New students are given Schick and Dick tests, small pox vaccinations and Wassermanns. All students enrolled are given a physical examination at the beginning of the school year. A dispensary hour is set aside each morning for the regular treatments and inspections other than emergencies. There is an average of fifteen per day reporting for such treatments. The ophthalmologist from the Department of Ophthalmology of the University of Iowa Hospital visits the school twice during the school year and examines the eyes of all students, making recommendations as he sees fit for treatment, refraction or operations.

If the foregoing outline suggests a poor state of health among our pupils, then I shall offer the statement that the health condition of our pupils is on a par with that in other schools. We offer this service, which may seem rather unusual, because we feel that it is an essential part of any good educational program. A sound body is essential to a sound mind, or perhaps it is more nearly correct to say that the sounder the body the greater the possibility for the development of a sound mind. We find that there is a need for the health program and we are honestly trying to meet this need, hoping to return our students to their community life better fitted for life's demands. "They that are whole need not a physician," but I am sorry to say that not all of our students are physically whole. We have the maimed as well as the blind.

The following names were omitted from the list of teachers in residential schools for the blind, which was published in the March issue of *The Teachers Forum*: Miss Mabel V. Lacy, Principal of the Territorial School for the Deaf and Blind, Honolulu, Hawaii, and Miss Eva Smyth, teacher of grades 1-5, Miss Isabel Kim, teacher of grades 5-8, and Mrs. Adele Lindeman, part-time vocational teacher in the same school. We have not yet heard from the schools mentioned in our preface to the March list. Also, there was an error in our data in regard to the subjects taught by Elwood Govan, of the Pennsylvania Institution for the Instruction of the Blind. Mr. Govan teaches English, mathematics, netting and commercial basketry instead of "machine sewing." The editor would be glad to hear from more of the readers in regard to the value of this list. It has already been suggested that degrees held be listed after the names of the teachers. Any other suggestions as to how it may be made more helpful will be appreciated.

OUTLINE FOR VOCATIONAL GUIDANCE PROGRAM FOR A SCHOOL FOR THE BLIND

EVELYN C. MCKAY

Editor's note: Because of the great interest in vocational guidance and training at the present time, a number of readers will be interested in the following "Outline for Vocational Guidance Program for a School for the Blind," by Evelyn C. McKay of the Foundation staff. Although much has been said and written on the subject since this outline was prepared in 1933, yet the basic assumptions made herein still seem to be sound.

Basic Principles

1. Definition of vocational guidance: "Assistance in choosing an occupation, preparing for it, entering upon it, and advancing in the chosen field."
2. Concept of guidance as a *process,* not an *event.*

Who Should Receive Vocational Guidance?

All students who are:

1. In the sixth grade or above, or
2. Fourteen years of age or over.

Procedure

1. Personal conferences between vocational counsellor and each individual pupil as frequently as necessary to establish confidence and make counsellor familiar with student's personality and abilities.
2. "Conference Panel" to meet once a year (probably twice a year for older pupils) for the purpose of reviewing each pupil's status from the vocational point of view and recommending in each case a program for the coming year.

Personnel of "Conference Panel"

Vocational counsellor
Field agent
Psychologist
Placement agent
School superintendent or principal
Classroom teacher (if schedules permit)
Teachers of special subjects (if schedules permit)

Factual Material to be Considered by "Conference Panel" (in relation to each pupil)

Classroom reports
Results of psychological tests
Health records, including
- (a) report of general physical examination
- (b) report of eye examination

House mothers' reports
Data about pupil's home community and family
Statement of pupil's occupational preference (probably secured by vocational counsellor in personal interview)
Occupational information
- (a) About occupations in which blind persons have been successful
- (b) About occupations, hitherto untried, which seem to offer opportunities
- (c) About occupational trends

Factors to be Considered in Making Recommendations for Individual Pupils

Pupil's capacity for general (academic) education
His special aptitudes and abilities
His physical condition
His personality (especially ability to adjust to social situations)
His vocational preferences
His family and cultural background
Opportunities for blind persons in occupations preferred; nature of work, qualifications required, probable returns in income and satisfactions
Practicability of following chosen occupation in pupil's home community
Likelihood of pupil's being able to establish himself away from home community

Preparation necessary for entrance into each of the preferred occupations; where to be secured; probable cost.

General Remarks

1. A definite occupational choice need not be made at once. Something will be gained if some impractical plans are eliminated, and the student develops a positive attitude.
2. The occupational choice, once made, may be modified—e.g., the intending teacher may decide to become a social worker, without involving much change in the early program.
3. The training program should include training outside the school as well as in the school.
4. The program should include special assistance to the student when he enters his chosen field—e.g., community contacts, temporary financing.
5. Provision should be made for continued counsel to the student after he enters his vocational life.

Occupational Information

1. General. There is a generous supply of material available on occupations for the seeing. Occupational trends should be watched — e. g., piano-tuning.
2. Special. The American Foundation for the Blind has on file a considerable amount of data on occupations in which blind persons have been successful.

Recording of Conference Panel's Recommendations

A careful record of each recommendation made by the Conference Panel should be kept, for two purposes:

1. As a basis for year-to-year counsel for the student;
2. As a means of checking the extent to which the recommendations are modified or followed, and a general measure of the value of vocational guidance.

Possible Relation of the American Foundation for the Blind

If desired, the Vocational Agent of the Foundation could possibly arrange to take part in the meetings of the Conference Panel and suggest occupations for consideration.

In any case, the occupational information collected by the Foundation is at the disposal of such a group.

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grades and the high school where the deficiency in vocabulary is more evident? Twenty-five new words per week, or five new words per day, for the forty weeks of the school year would turn the trick. And the systematic study of new words with a consideration of their derivation, the changes in form and meaning which have occurred through the years, and wherever possible, experience of their meaning in terms of other senses than vision, should greatly enrich the whole curriculum.

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THE EDUCATIONAL ACHIEVEMENT OF FIFTH AND SIXTH GRADE BLIND CHILDREN

GEORGIE LEE ABEL

The above was the subject of a thesis written in partial fulfillment of the requirements for the M. A. degree from George Peabody College for Teachers at Nashville, Tennessee. (August 21, 1937.)

Introduction

The following is an abstract of a thesis on the above subject. The study was carried on during the school year, 1936-37. More than sixteen schools cooperated in the study, and though the actual number of cases studied seems small, the rather large geographical area represented seems to afford a fair picture of the achievement of these students. It is unfortunate that some of the schools had to withdraw from the study due to illness of students and other unavoidable causes.

It is hoped that this brief report will be of interest at least to those who rendered such valuable assistance in the project.

It should be said further that these braille tests, the Unit Scales of Attainment, may be obtained from the American Printing House for the Blind at a very reasonable cost. An adaptation of the manual may be obtained from the writer.

Only by using more of these measuring instruments, making serious adaptations of them, and studying the results carefully, can the education of the blind progress in a scientific manner worthy of its importance.

Abstract

The purpose of this study was to adapt a well-standardized achievement test for use with blind children; to have this test given to pupils in the fifth and sixth grades of a number of schools for the blind in the United States; to study the results of the test from the standpoint of achievement in subject matter; and to try to draw conclusions from the data which may be helpful to teachers of blind children in these grades.

The test which was selected for this adaptation was the Unit Scales of Attainment, and after the adaptation of the actual test booklets was made the test was brailled by the American Printing House for the Blind.

One of the schools cooperating in the project was used as a laboratory for the purpose of testing the clarity of the instructions in the manual and for the establishment of the time limits for the various tests. The median time limits on the basis of twenty-two cases served as the guide for the schools which are actually studied in the final tabulations.

There were eighty fifth grade children and eighty-three sixth grade children from twelve schools for the blind to whom the test was administered according to the instructions which were found to work successfully in the experimental group of twenty-two cases.

The median chronological age of the fifth grade was found to be thirteen years and four months, while that of the sixth was computed as fourteen years and eight months.

All median attainments of the blind children were found to be higher than the norms for seeing children except in the case of fifth grade reading and sixth grade fundamental operations. The blind children in both grades made their best scores in arithmetic problems, with spelling, literature and history approaching the highest medians closely.

When the median chronological ages were compared with the educational ages of the children, the fifth grade was found to be accelerated in educational achievement by about four months. In the same comparison, the sixth grade shows a retardation of one year and six months. This greater retardation of the sixth grade seems to be due mainly to the fact that the median chronological age for the sixth grade is one year and four months greater than the corresponding age

for the fifth grade children. The greatest retardation was found in the case of the younger children at the lowest quartile points. It seems highly probable that the greater retardation at each end of the scale distribution is due to the heterogeneity of the group, considering, of course, the great differences in chronological ages of the pupils.

Certain correlations of relationship between designated subject matter scores were run, and revealed very little relationship. The highest correlations were found to exist between literature and usage for both grades. They were .51 and .55 for the fifth and sixth grades respectively.

The following chart from the study is presented in the hope that it will be of interest to the superintendents and teachers of students who participated in the tests. It may be considered as a composite report of the work done by the schools. The writer could furnish each school with the scores made by its respective students, but so much time was necessary in order to prepare the medians for all the schools, that it seemed best to wait until the results could be published in the *Forum*. If the various school medians are compared with the ones in the chart, the standing of the schools in the various subjects can be determined.

One very noticeable fact about the chart is that in many cases the seeing norms are lower than the medians attained by the blind children. This cannot be due to a special type of instruction given to all the children, or to a special plan of size of classes. The study not only represents a very wide geographical area, but there are fifth and sixth grade classes from classes numbering from five to fifteen in a grade. This seems to cover the situation which would be found in any sized residential school.

A study of the educational ages of the pupils was made, and it was found that the children in the upper and lower quartiles were retarded more than those in the fifty per centile group. This fact was rather

Table II

Certain Statistical Data for the Fifth Grade

	Read.	Geo.	Lit.	Hist.	Probs.	Fun. Op.	Spell.	Cap.	Punc.	Usage
Seeing norms	69	71	70	71	71	68	69	67	64	65
Medians	68.31	82.65	82.33	85.28	86.92	73.23	83.67	71.85	75.15	72.83
P. E. Md.	1.45	1.00	.99	1.20	1.00	.58	1.15	.78	1.23	.90
Q_3	77.33	88.75	88.96	94.86	94.61	78.21	92.00	76.72	80.42	79.99
$\tilde{Q}_1$	56.66	74.50	76.04	79.25	80.31	70.00	75.50	86.33	84.01	66.02
$\tilde{Q}$	10.35	7.17	6.46	7.80	7.15	4.10	8.25	5.18	8.20	5.98
$\tilde{Sk}$	9.42	1.26	3.13	1.81	1.47	–1.77	–1.24	– .99	.95	.87
Ku	.21	.27	.21	.36	.26	.18	.30	.24	.32	.25
% Retard.	1									
% Acc.		37	40	39	44	31	39	24	32	31

Table III

Certain Statistical Data for the Sixth Grade

	Read.	Geo.	Lit.	Hist.	Probs.	Fun. Op.	Spell.	Cap.	Punc.	Usage
Seeing norms	73	77	76	77	79	79	78	71	68	68.5
Medians	74.17	85.13	79.22	84.06	90.44	77.13	87.84	73.38	73.09	70.97
P.E.Md.	.86	.91	1.02	.84	1.13	.92	.80	.75	.85	.84
Q_3	79.15	91.25	87.62	91.81	87.92	85.35	93.56	78.63	78.96	78.84
$\tilde{Q}_1$	66.56	77.97	73.46	80.16	81.34	71.94	81.87	67.73	66.58	64.58
$\tilde{Q}$	6.30	6.64	7.08	5.25	8.29	6.71	5.84	5.45	6.19	6.13
$\tilde{Sk}$	4.33	–5.39	–4.25	–2.07	–1.24	– .60	.14	– .51	– .11	.04
Ku	.18	.18	.27	.25	.26	.30	.26	.25	.28	.29
% Retard.						8				
% Acc.	5	30	12	29	33		37	12	21	11

consistently true in all of the subjects. Apparently the instruction which has to be offered to groups which are as heterogeneous as is often the case in schools for the blind, does not meet the needs of all of the children. This fact is sufficiently evident in this study to draw from it the conclusion that in many cases the older children should be given special help and placed in grades which would more nearly correspond with their chronological ages. In the case of some of the larger schools represented, it could well furnish an argument for a special teacher for these pupils.

It will be noted also that there are more high medians among the fifth grade results than among the sixth. There may be a question of some re-grading in certain instances, but it would seem that the fault is due mainly to the sampling. The writer admits that the study is not sufficiently extensive to draw conclusions of this nature, but in the absence of more data, it would undoubtedly have to be laid to the sampling.

It must be said in partial explanation of the low median in reading, that this test is the longest one in the series, and that there could have been an element of fatigue, but there was no tabulation of the answers which would show this to be true. It must be said, however, that the fact that the poorest work of the students was done in reading certainly agrees with the results of other studies which the writer has made and of some which are now being developed.

It should be said for the manual, that in no instance was there an indication that the instructions were misunderstood. The adaptation of the manuals for our tests seems just as important a matter in standardizing our work as any other phase of testing. If the tests are purchased in braille, to be given to the children, they should certainly be administered according to some uniform method of procedure, if we are to benefit by comparisons.

THE TEACHERS FORUM

for

Instructors of Blind Children

Address all communications to

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The Editor will not be responsible for opinions expressed in signed articles.

May, 1938

The editor has recently been privileged to visit ten schools for the blind, most of them in the Middle West. Although his time was very limited, he observed some excellent work. In mentioning a few of the things which impressed him favorably, he does not wish to imply that these were the only important things or even the most important things noticed. He merely wishes to call attention to several things which interested him and which may be of interest to others.

In the Oklahoma School, besides the work mentioned in three articles to be published in the September issue, he would like to call attention to the fact that an expert teacher of braille gives periodic tests in the upper grades in order to make sure that the pupils maintain a certain standard in their braille writing, and another teacher does the same in regard to braille reading. The work of the music department is so fine that pupils going on to college have been entered as third year students. Girls, as well as boys, study poultry raising and the boys are given a practical two-year course in dairy husbandry and do the milking morning and night at the school dairy.

The Kansas School, in addition to doing other fine work, has an outstanding course in Speech Arts, as was proved by a one-act play given during the assembly period and an interpretive reading and organ recital on the same evening when he was there.

Especially noteworthy at the Nebraska School is the interest of community groups and private individuals in the pupils. The town orchestra practices at the School one night a week with the School orchestra, public school speaking contestants try out at School assemblies, the proprietor of one of the motion picture theaters wishes to have all of the pupils and teachers attend his theater as often as possible, and a former graduate of the School who has now become rich and famous sends each of the pupils who does not smoke a dollar per month for spending money and a half-pound box of candy each week, besides doing many other things for both pupils and teachers.

Many things at the Iowa School are worthy of mention. The medical set-up is ably presented elsewhere in this issue. Other matters are the testing program, the course in cosmetology and its influence upon the girls' personal appearance, the beautiful chapel, the recreation rooms and the club activities, and the roll skating ring.

He was unable to be at the Missouri School while classes were in session and could spend only a short time at the Illinois School, but everything seemed to be of the high degree of excellence that would be expected in schools managed by such able and experienced educators as Mr. Green and Mr. Woolston.

The plant of the Indiana School is a revelation. It is practical and up to date, and when the landscaping which is being done has been finished it will be one of the most beautiful institutions in the entire country. A progressive attitude prevails and he observed a number of things which he hopes will be written up in future articles.

The Ohio School has become noted for the research work which has recently been done there. Besides the studies which he has made himself, Mr. Scarberry has directed the work of a number of graduate students who have written theses on various subjects pertaining to the education of the blind. Mr. Niday is completing an interesting study at the present time and the results will soon be available. Anyone interested can probably borrow a copy of any of these theses from the School library. Another matter which should have been given greater publicity was the centennial celebration of the Ohio School.

The Western Pennsylvania School was visited on a holiday, but he noticed particularly the fine museum pieces which have been made by W. P. A. workers, the excellent labeling of the books in the very complete library and the splendid physical education unit.

The New York Institute was re-visited partly on account of the deaf-blind unit, and this is worth traveling a long way to see. The most modern ideas have been followed in its construction and it is equipped with the latest devices. Another new building which should be mentioned is the apartment house for married teachers. Some very good work in curriculum revision and the preparation of material especially for the blind have been accomplished, the parent-teacher association has been quite successful and the recent pamphlet prepared for Visitors' Day deserves careful study.

These are only a few of the things worthy of mention which were observed and he hopes that no one will feel slighted because others have been omitted. Readers wishing more information in regard to projects or work mentioned should write to the various schools. It is needless to say that the visits were most enjoyable and that he hopes that other schools can be visited in the near future.

OUR CONTRIBUTORS

Those who have written articles for this issue of *The Teachers Forum* need no introduction to our readers. Dr. Samuel P. Hayes and Dr. Edward E. Allen are regular contributors, Miss Evelyn C. McKay is a member of the Foundation staff, F. E. Palmer is Superintendent of the Iowa School for the Blind, and Miss Georgie Lee Abel is a teacher in that school.

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